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PROJECT SPECIFIC PLAN FOR AREA 2, PHASE II – SUBAREAS 1, 2, AND 4 CERTIFICATION SAMPLING

SOIL AND DISPOSAL FACILITY PROJECT

FERNALD CLOSURE PROJECT
FERNALD, OHIO

DECEMBER 2003

U.S. DEPARTMENT OF ENERGY

20450-PSP-0004
REVISION 0
FINAL

000001

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

A2PII	Area 2, Phase II
ASCA	Arsenic Soil Contamination Area
ASCOC	Area Specific Constituent of Concern
ASL	analytical support level
CDL	Certification Design Letter
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	constituent of concern
CU	certification unit
DQ	Data Quality Objectives
FACTS	Fernald Analytical Computerized Tracking System
FAL	Field Activity Log
FCP	Fernald Closure Project
FRL	final remediation level
MDL	Minimum Detection Level
mg/kg	milligrams per kilogram
pCi/g	picoCuries per gram
PSP	project specific plan
PWID	Project Waste Identification Document
QA/QC	Quality Assurance/Quality Control
SCQ	Sitewide CERCLA Quality Assurance Project Plan
SDFP	Soil and Disposal Facility Project
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
SPL	Sample Processing Laboratory
TAL	Target Analyte List
V/FCN	Variance/Field Change Notice
WAO	Waste Acceptance Organization

1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

This Project Specific Plan (PSP) describes the certification sampling and analysis necessary to certify Area 2, Phase II (A2PII), including the Arsenic Contamination Area (ASCA), the Radium Hot Spot, parts of the Infrastructure Area, and any of the Remaining Area. The purpose of certification is to verify that residual soil constituent of concern (COCs) concentrations meet the final remediation levels (FRLs) when evaluated by statistical criteria documented in Appendix G of the Sitewide Excavation Plan (SEP). The A2PII certification area is approximately 63 acres and is located in the southwest portion of the Fernald Closure Project (FCP) (see Figure 1-1). The A2PII certification area is east of Paddy's Run, north of the Southern Waste Units (SWU), south of the Silos Area, and southwest of the Former Production Area.

As mentioned in Section 1.0 of the Area 2, Phase II Certification Design Letter (CDL), A2PII has been divided into Three Certification Phases. Phase One includes areas that have already been certified: the Soil Pile MTL-HRD-011 and the footprint of Soil Stockpile-3 (SP-3). The focus of A2PII certification as discussed in this CDL/PSP is Phase Two, which includes the ASCA, Radium Hot Spot, and Remaining Areas of A2PII. Phase Three of certification includes Subarea 3, as defined in the A2PII Implementation Plan, and will be addressed in a separate CDL/PSP.

1.2 SCOPE

This PSP includes details of certification sampling for A2PII, specifically the ASCA, the Radium Hot Spot, and the Remaining Areas. The certification design is consistent with the CDL for A2PII. All sampling and analysis activities will be consistent with the Sitewide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Quality Assurance Project Plan (SCQ), Section 3.4 of the Sitewide Excavation Plan (SEP), and the Data Quality Objectives (DQO) SL-052, Revision 3, which is included as Appendix A of this PSP.

This PSP and CDL do not cover the certification sampling associated with the following:

- Pilot Plant Ditch that drains from the advanced Wastewater Treatment area to Paddy's Run immediately south of OU4 Detention Basin
- Previously Certified Areas – Soil Stockpile 3 and soil pile MTL-HRD-011 [see *Certification Report for A2PII – Part 3 Soil Stockpile Footprint* (DOE 2001) and *Certification Report for A2PIII – Part One, MTL-HRD-011* (DOE 1999), respectively]

- The Equipment Wash Facility, Subcontractor Area, Impacted Material Haul Road, and Trailer Complex Area of Subarea 3
- OU5 Groundwater Treatment Infrastructure – remediation of several wells, supporting utilities, and SWU Access Road are not included in the scope of this CDL
- Long-Term Service Utilities – underground drinking water and natural gas utilities are needed for long-term operations.

1.3 KEY PERSONNEL

Key personnel responsible for performance of the project are listed in Table 1-1.

TABLE 1-1

KEY PERSONNEL

TITLE	PRIMARY	ALTERNATE
DOE Contact	Johnny Reising	TBD
SDFP Management	Jyh-Dong Chiou	Rich Abitz
Characterization Manager	Frank Miller	Krista Flaugh
Field Sampling Manager	Tom Buhrlage	Jim Hey
Surveying Manager	Jim Schwing	Andy Clinton
WAO Contact	Linda Barlow	TBD
Laboratory Contact	Heather Medley	Kathie Leslie
Data Management Contact	Krista Flaugh	Denise Arico
Data Validation Contact	James Chambers	Andy Sandfoss
Field Data Validation Contact	Andy Sandfoss	James Chambers
FACTS/SED Database Contact	Kym Lockard	Susan Marsh
Quality Assurance Contact	Reinhard Friske	Dick Scheper
Health and Safety Contact	Gregg Johnson	Jeff Middaugh

FACTS – Fernald Analytical Customer Tracking System
SDFP – Soil and Disposal Facility Project
SED – Sitewide Environmental Database
WAO – Waste Acceptance Organization

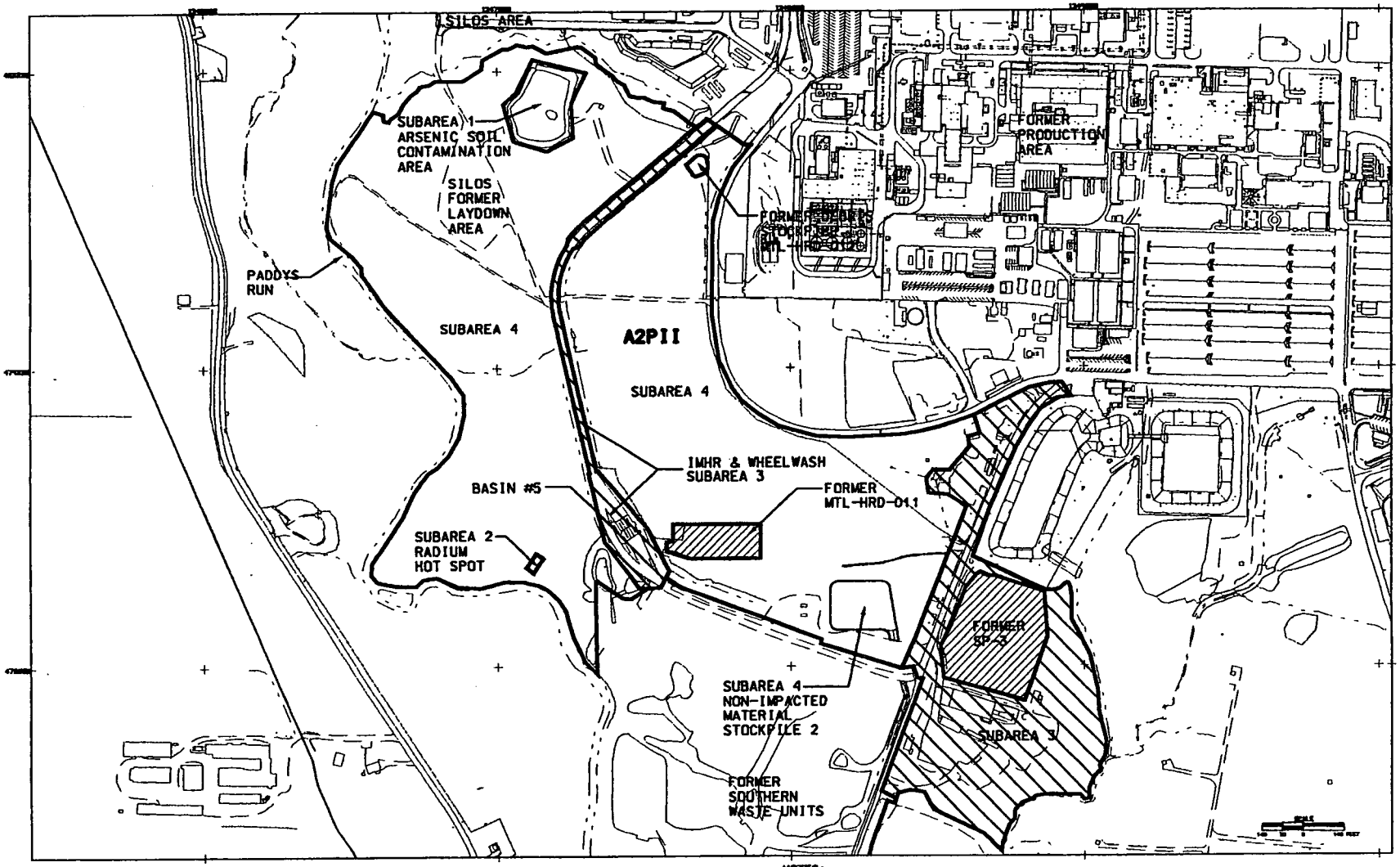

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FIGURE 1-1. A2PII CERTIFICATION AREA LOCATION MAP

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2.0 CERTIFICATION SAMPLING PROGRAM

2.1 CERTIFICATION DESIGN

Details and logic of the certification design are described in the A2PII Certification Design Letter (CDL). Within A2PII, 45 Group 1 Certification Units (CUs) have been established. Figure 2-1 illustrates the Group 1 CUs. Each CU is divided into 16 sub-CUs. Within each sub-CU, one random certification sample location has been identified. The sample locations were tested against the minimum distance criterion, as defined in the SEP. Certification sampling will consist of sample collection at 12 of the 16 randomly selected locations, plus one field duplicate sample within each CU. All 13 soil samples (12 plus the field duplicate) from each CU will be analyzed for the primary radiological area specific constituents of concern (ASCOCs), and arsenic and beryllium (secondary ASCOCs). The sample locations, duplicate samples, and archive samples are identified in Appendix B.

2.2 SURVEYING

Before certification sampling, the North American Datum of 1983 (NAD83) State Planar Ohio South Zone, 3402 coordinates for each selected sampling location will be surveyed and identified in the field with a flag. All locations will be field verified by sampling personnel to ensure no surface obstacles will prevent collection at the planned location. Appendix B and Figures 2-2 through 2-6 show the certification sampling locations, all of which meet the minimum distance criterion. Coordinate data will be forwarded to characterization personnel for data storage.

2.3 PHYSICAL SOIL SAMPLE COLLECTION

Certification samples will be collected according to procedure SMPL-01, Solids Sampling. Certification samples will be collected using 3-inch diameter, 6-inch long, plastic or stainless steel liners that will be sealed using plastic end caps. At the discretion of the Field Sampling Lead, samples may be collected using other methods specified in SMPL-01, as long as sufficient volume is collected to perform the prescribed analyses.

Only 12 certification samples plus the one field duplicate sample per CU that are planned for analysis will be collected. Samples designated as archives (i.e., a "V" in the sample ID) will be identified in the field, but will not be collected unless the need arises. If this is the case, collection will be accomplished according to this PSP, and a Variance/Field Change Notice (V/FCN) will be issued to specify the additional samples to collect and analyze.

Before collecting the soil borings/samples, the field sampling technician will remove all surface vegetation within 6 inches of the locations to be sampled using a gloved hand or stainless steel trowel and taking care not to remove any of the surface soil. In order to meet the quality control requirements for field duplicate samples, twice the soil volume (a second core) will be collected at one location per CU, as identified in Appendix B. The field duplicate soil samples will be collected according to procedure SMPL-21, Section 6.5, and will not be homogenized. All samples, including field duplicates, will be assigned unique sample identification numbers as shown in Appendix B. The container blanks will be collected (see Section 4.1) from both the core liner and the end caps that will be used to seal it.

If a subsurface obstacle prevents sample collection at the specified location, it can be moved according to the following guidelines:

- The distance moved must be as small as possible (less than 3 feet);
- It must remain within the boundary of the same CU and sub-CU, and must still meet the minimum distance criterion;
- If the distance moved is greater than 3 feet, the move must be documented in a V/FCN, considered as significant, which will be approved by the agencies prior to collection.

Anytime a location is moved, Figure 2-3, 2-4, 2-5, or 2-6 should be used to determine the best direction to move the point to adhere to the above guidelines. All final sampling locations will be documented in the A2PII Certification Report.

Customer sample numbers and FACTS identification numbers will be assigned to all samples collected. The sample labels will be completed with sample collection information, and technicians will complete a Field Activity Log (FAL), a Sample Collection Log, and a Chain of Custody/Request for Analysis form in the field prior to submittal of the samples for analysis. All soil samples collected from one CU (including field duplicates) will be batched and submitted to the Sample Processing Laboratory (SPL) under one set of Chain of Custody forms. All samples originating from a single CU will represent one analytical release. Rinsates/container blanks will be listed together on a separate Chain of Custody form. Upon completion of sample collection, boreholes will be abandoned according to DRL-01, Plugging and Abandonment.

Based on historical data, precertification scan data and process knowledge, no photoionization detector survey or radiological survey will be necessary. Also, no alpha/beta screens will be required for samples to be shipped off site.

2.3.1 Equipment Decontamination

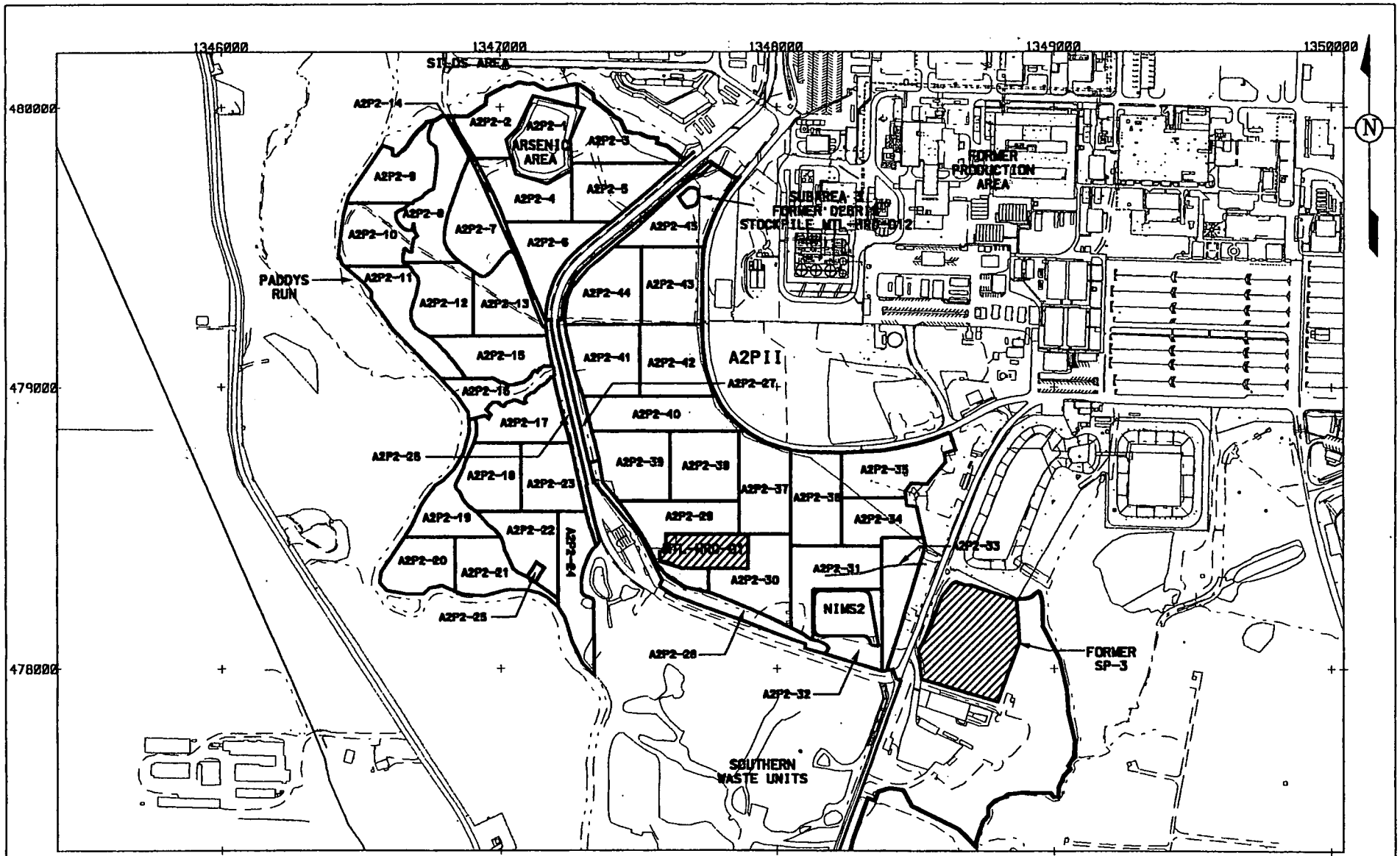
Decontamination is performed to prevent the introduction of contaminants from sampling equipment to subsequent soil samples. As described in SMPL-01, all sampling equipment (core tubes and caps) will have been decontaminated before it is transported to the field site, and the core liners will be decontaminated using the Level II (Section K.11 of the SCQ) procedure upon receipt from the manufacturer. Decontamination is also necessary in the field if sampling equipment is reused. If an alternate sampling method is used, equipment will be decontaminated between collection of sample intervals, and again after the sampling performed under this PSP is completed. Following decontamination, clean disposable wipes may be used to replace air-drying of the equipment.

2.3.2 Certification Physical Sample Identification

Each soil certification sample will be assigned a unique sample identification number as *A2P2-C#-Location^Depth-Analysis-QC*, where:

A2P2	=	Sample collected from Remediation A2PII (Note that the number "2" is used in place of the roman numeral "II" in the ID for data management purposes)
C#	=	Certification sample representing certification unit from which sample was collected (numbered as C1 through C45)
Location	=	Sample Location number within each CU (1 through 16)
Depth	=	"1" = 0 to 6-inch interval (where the depth interval indicator equals two times the bottom depth for the respective interval and is measured in feet, i.e., "1" = 2 x 0.5')
Analysis	=	"R" indicates radiological analysis; "M" indicates metal analysis.
QC	=	Quality control sample, if applicable. A "D" indicates a field duplicate sample. "X" indicates a rinsate sample; a "Y" indicates a container blank sample.

For example, a duplicate sample taken from the 1st sample location from CU-2 from 0 to 6-inches for radiological and metal analysis would be identified as A2P2-C2-1^1-RM-D. Rinsates and container blanks will be identified as A2P2-C#-X and A2P2-C#-Y, respectively, and the analysis code (-R) will be also be added. For example, the rinsate collected for CU 5 will be identified as A2P2-C5^R-X.



LEGEND:

A2PII BOUNDARY

CERTIFIED AREA

SCALE

500 250 0 500 FEET

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STATE PLANAR COORDINATE SYSTEM 1983

14-OCT-2003

FIGURE 2-1. A2PII CU DESIGN

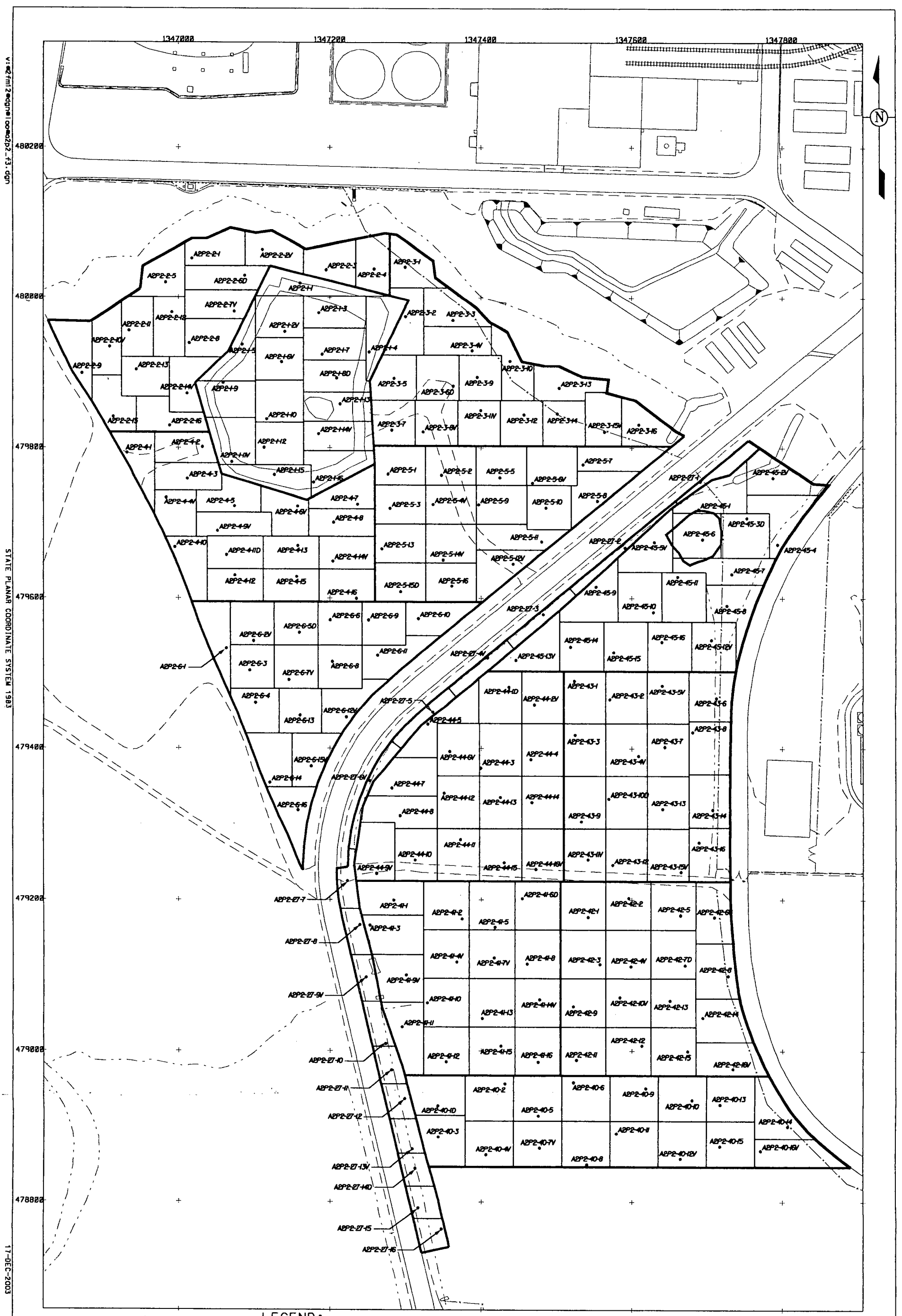

FIGURE 2-3. NORTHEAST QUADRANT, CU SAMPLING LOCATIONS

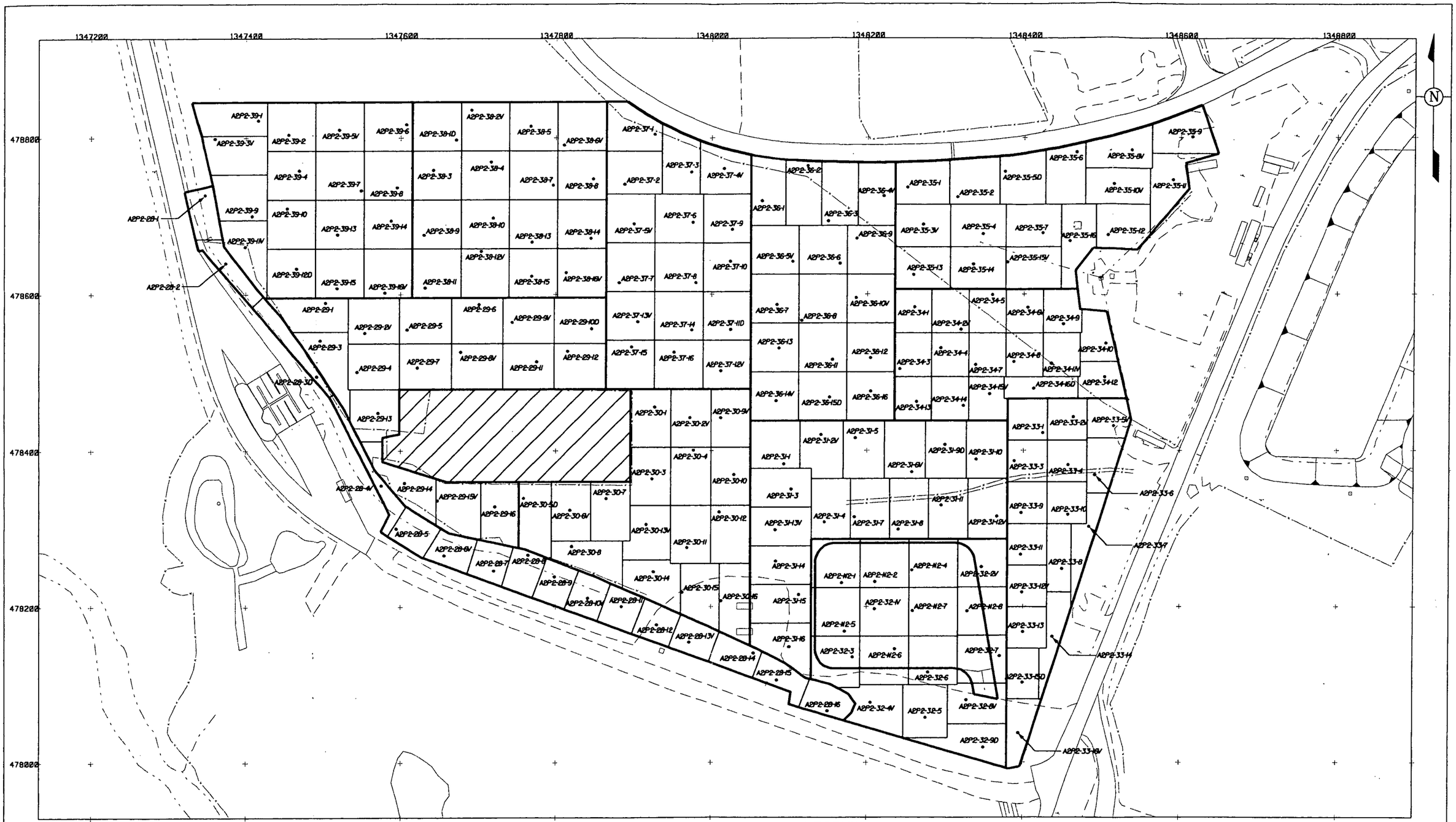

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FIGURE 2-4. SOUTHEAST QUADRANT, CU SAMPLING LOCATIONS

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STATE PLANAR COORDINATE SYSTEM 1983

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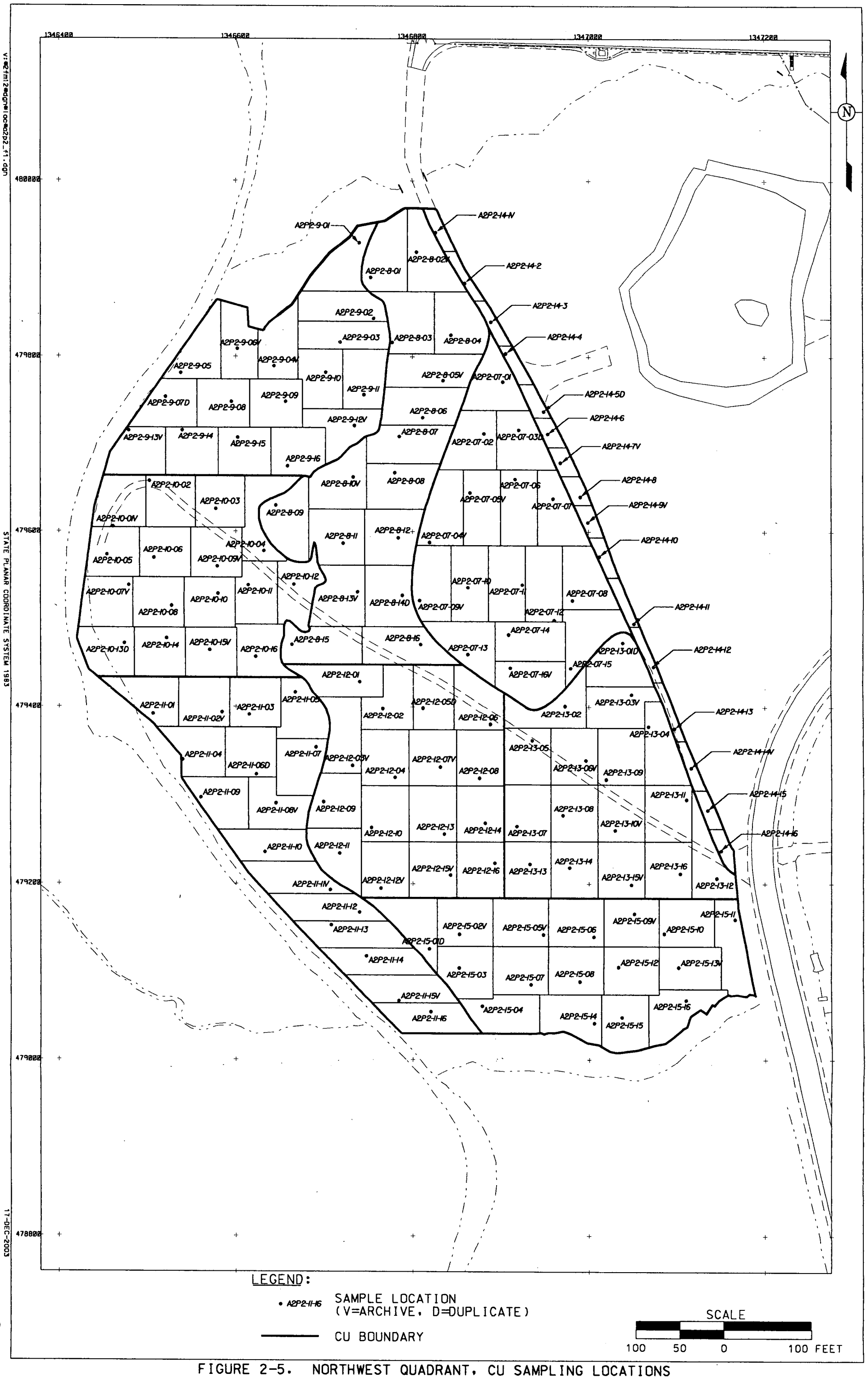

FIGURE 2-5. NORTHWEST QUADRANT, CU SAMPLING LOCATIONS

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1346600 1346800 1347000 1347200 1347400

479200 479000 478800 478600 478400 478200 478000

N

A2P2-25-01V A2P2-25-02 A2P2-25-03 A2P2-25-04 A2P2-25-05 A2P2-25-06 A2P2-25-07 A2P2-25-08V A2P2-25-09 A2P2-25-10 A2P2-25-11 A2P2-25-12V A2P2-25-13 A2P2-25-14 A2P2-25-15D A2P2-25-16V

A2P2-16-01V A2P2-16-02 A2P2-16-03 A2P2-16-04 A2P2-16-05 A2P2-16-06 A2P2-16-07V A2P2-16-08 A2P2-16-09V A2P2-16-10 A2P2-16-11 A2P2-16-12 A2P2-16-13 A2P2-16-14V A2P2-16-15 A2P2-16-15D

A2P2-17-01 A2P2-17-02 A2P2-17-03V A2P2-17-04 A2P2-17-05V A2P2-17-06 A2P2-17-07 A2P2-17-08 A2P2-17-09D A2P2-17-10 A2P2-17-11V A2P2-17-12 A2P2-17-13 A2P2-17-14V A2P2-17-15 A2P2-17-16

A2P2-18-01 A2P2-18-02V A2P2-18-03 A2P2-18-04D A2P2-18-05V A2P2-18-06 A2P2-18-07 A2P2-18-08 A2P2-18-09 A2P2-18-10 A2P2-18-11V A2P2-18-12 A2P2-18-13 A2P2-18-14 A2P2-18-15 A2P2-18-16V

A2P2-19-01V A2P2-19-02D A2P2-19-03 A2P2-19-04 A2P2-19-05 A2P2-19-06 A2P2-19-07 A2P2-19-08V A2P2-19-09V A2P2-19-10 A2P2-19-11 A2P2-19-12 A2P2-19-13V A2P2-19-14 A2P2-19-15 A2P2-19-16

A2P2-20-01 A2P2-20-02 A2P2-20-03 A2P2-20-04V A2P2-20-05 A2P2-20-06 A2P2-20-07V A2P2-20-08 A2P2-20-09V A2P2-20-10 A2P2-20-11D A2P2-20-12 A2P2-20-13 A2P2-20-14 A2P2-20-15 A2P2-20-16V

A2P2-21-01 A2P2-21-02 A2P2-21-03V A2P2-21-04 A2P2-21-05 A2P2-21-06 A2P2-21-07V A2P2-21-08 A2P2-21-09 A2P2-21-10V A2P2-21-11 A2P2-21-12 A2P2-21-13 A2P2-21-14 A2P2-21-15 A2P2-21-16D

A2P2-22-01V A2P2-22-02 A2P2-22-03 A2P2-22-04 A2P2-22-05 A2P2-22-06V A2P2-22-07 A2P2-22-08 A2P2-22-09D A2P2-22-10 A2P2-22-11V A2P2-22-12 A2P2-22-13 A2P2-22-14V A2P2-22-15 A2P2-22-16

A2P2-23-01 A2P2-23-02V A2P2-23-03 A2P2-23-04 A2P2-23-05D A2P2-23-06V A2P2-23-07 A2P2-23-08 A2P2-23-09V A2P2-23-10 A2P2-23-11 A2P2-23-12 A2P2-23-13 A2P2-23-14 A2P2-23-15 A2P2-23-16V

A2P2-24-01 A2P2-24-02 A2P2-24-03V A2P2-24-04 A2P2-24-05 A2P2-24-06V A2P2-24-07 A2P2-24-08D A2P2-24-09V A2P2-24-10 A2P2-24-11 A2P2-24-12 A2P2-24-13 A2P2-24-14 A2P2-24-15V A2P2-24-16

EXPANDED VIEW

A2P2-RHS-C-1 A2P2-RHS-C-2 A2P2-RHS-C-3 A2P2-RHS-C-4 A2P2-RHS-C-5 A2P2-RHS-C-6 A2P2-RHS-C-7 A2P2-25-8 A2P2-25-9 A2P2-25-10 A2P2-25-11 A2P2-25-12 A2P2-25-13 A2P2-25-14 A2P2-25-15V A2P2-25-16

LEGEND:

• A2P2-25-9 SAMPLE LOCATION (V=ARCHIVE, D=DUPLICATE)

CU BOUNDARY

SCALE

100 50 0 100 FEET

FIGURE 2-6. SOUTHWEST QUADRANT, CU SAMPLING LOCATIONS

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3.0 CERTIFICATION SAMPLE ANALYSIS

All samples will be prepared for shipment to off-site laboratories per procedure 9501 Shipping Samples to Off-site Laboratories. Samples will only be shipped to off-site laboratories that are listed on the Fluor Fernald Approved Laboratories List. The necessary volume of all samples collected will be prepared for the appropriate analytical method per requirements in the SCQ. Sampling and analytical requirements are listed in Table 3-1. The TALs are shown in Table 3-2 and Table 3-3.

As soon as the samples arrive at the laboratory where the analysis will take place, all samples should be prepared for analysis (including homogenization for non-VOC samples), and radiological samples should be sealed to begin the in-growth period for radium analysis. A 30-day turnaround time will be required for the remaining samples submitted for analysis.

TABLE 3-1

SAMPLING AND ANALYTICAL REQUIREMENTS

Analyte	Method	Sample Matrix	ASL	Preserve	Holding Time	Minimum Mass	Container [b]
Radiological (TALs A)	Gamma Spec	Solid	D/E [a]	Cool, 4° C	12 months	500 g (1500g) [c]	Glass or Plastic
Metals (TALs B)	ICP-AES, ICP/MS, or GFAA				6 months		
Radiological (TALs A)	Gamma Spec	Liquid (rinsates)	D/E [a]	HNO_3 pH<2	6 months	4 liters	Glass or Polyethylene
Metals (TALs B)	ICP-AES, ICP/MS, or GFAA	Liquid (rinsates)	D/E [a]	HNO_3 pH<2	6 months	1 liter	Polyethylene

[a]Samples will be analyzed according to Analytical Support Level (ASL) D requirements but the minimum detection level may cause some analyses to be considered ASL E.
[b]Sample container types may be changed at the direction of the Field Sampling Lead, as long as the volume requirements, container compatibility requirements, and SCQ requirements are met.
[c]At the direction of the Field Sampling Lead, triple the specified volume must be collected for all samples at one location per CU in order for the contract laboratory to perform the required quality control analysis. The sample shall be identified on the Chain of Custody/Request for Analysis form as "designated for laboratory QC".

ICP-AES – inductively coupled plasma atomic emission spectroscopy
ICP/MS – inductively coupled plasma mass spectroscopy
GFAA – graphite furnace atomic absorption

TABLE 3-2

TARGET ANALYTE LIST A2P2CERT-A
(RADIOLOGICAL - ASL D/E*)

ANALYTE	FRL	MDL (soil)	MDL (water)
Total Uranium	82 mg/kg	8.2 mg/kg	12.3 µg/mL
Radium-226	1.7 pCi/g	0.17 pCi/g	0.255 pCi/mL
Radium-228	1.8 pCi/g	0.18 pCi/g	0.27 pCi/mL
Thorium-228	1.7 pCi/g	0.17 pCi/g	0.255 pCi/mL
Thorium-232	1.5 pCi/g	0.15 pCi/g	0.225 pCi/mL

TABLE 3-3

TARGET ANALYTE LIST A2P2CERT-B
(METALS - ASL D/E*)

ANALYTE	FRL	MDL (soil)	MDL (water)
Arsenic	12 mg/kg	1.2 mg/kg	18 µg/mL
Beryllium	1.5 mg/kg	0.15 mg/kg	2.25 µg/mL

*Analytical requirements will meet ASL D but the minimum detection level set at 10 percent of the FRL may cause some analyses to be considered ASL E.

MDL – Minimum Detection Level (same as HAMDC in SCQ)
µg/mL – micrograms per milliliter
mg/kg – milligrams per kilogram
PCi/g – picoCuries per gram
PCi/mL – picoCuries per milliliter

4.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

4.1 FIELD QUALITY CONTROL SAMPLES, ANALYTICAL REQUIREMENTS AND DATA VALIDATION

Per requirements of the SEP and DQO SL-052, Rev.3, the field quality control, analytical and data validation requirements are as follows:

- Field quality control requirements include one field duplicate for each CU, as noted in Appendix B and further described in Section 2.4. Two container blanks will be collected – one before sample collection begins and one at the conclusion of sample collection – for the push tubes and end caps. If an alternate sample collection method is used, one rinsate sample will be collected at a minimum frequency of one per 20 certification samples where reusable equipment (e.g., hand augers) is used for collection. All field QC samples will be analyzed for TALs A and B.
- The analytical package for total uranium, thorium-228 and thorium-232 analysis by gamma spectroscopy will be identical in specifications for ASL D except for the HAMDC. As a result, the total uranium, thorium-228 and thorium-232 gamma spectroscopy data are considered ASL E.
- All field data will be validated. An ASL D analytical package will be provided for all of the samples. At a minimum, 10 percent of the analytical data will be validated to Validation Support Level (VSL) D and ninety percent to VSL B. This will be obtained by five randomly selected CUS: A2P2-C5, A2P2-C14, A2P2-C30, A2P2-C38, and A2P2-C42. If any result is rejected, the sample will be re-analyzed or an archive sample will be analyzed in its place. All data from that laboratory will be validated to VSL D for the affected CU. If necessary, this change will be documented in a V/FCN to this PSP.

Once all data are validated as required, results will be entered into the SED and a statistical analysis will be performed to evaluate the pass/fail criteria for each CU. The statistical approach is discussed in Section 3.4.3 and Appendix G of the SEP. This work is being performed per the requirements as stated in the DQO SL-052 (Appendix A).

4.2 PROJECT-SPECIFIC PROCEDURES, DOCUMENTS AND MANUALS

To ensure consistency and data integrity, field activities in support of the PSP will follow the requirements and responsibilities outlined in the procedures and guidance documents references below.

- ADM-02, Field Project Prerequisites
- ALS 9501, Shipping Samples to Offsite Laboratories
- EQT-33, Real Time Differential Global Positioning System Operation
- FD-1000, Sitewide CERCLA Quality Assurance Project Plan (SCQ)
- SMPL-01, Solids Sampling
- SMPL-21, Collection of Field Quality Control Samples
- Trimble Pathfinder Pro-XL GPS Operation Manual
- Sitewide Excavation Plan (SEP)
- Implementation Plan for Area 2, Phase II
- Certification Design Letter for the A2PII – Subareas 1, 2, and 4.

4.3 INDEPENDENT ASSESSMENT

Independent assessment may be performed by the FCP Quality Assurance/Quality Control (QA) organization by conducting surveillance, consisting of monitoring/observing ongoing project activities and work areas to verify conformance to specified requirements. Surveillances will be planned and documented in accordance with Section 12.3 of the SCQ.

4.4 IMPLEMENTATION OF CHANGES

Before implementation changes, the Field Sampling Lead will be informed of the proposed changes. Once the Field Sampling Lead has obtained written or verbal approval (electronic mail is acceptable) from the Characterization Manager and QA/QC for the changes to the PSP, the changes may be implemented. Changes to the PSP will be noted in the applicable field activity logs and on a V/FCN. QA/QC must receive the completed V/FCN, which includes the signatures of the Characterization and Sampling Manger, Project Director, and QA/QC within seven working days of implementation of the change. All significant field changes (sample moves greater than 3 feet, changes from SEP certification strategy, etc.) require USEPA and OEPA approval.

5.0 HEALTH AND SAFETY

All FCP employees, visitors, vendors, and contractors associated with these activities must abide by site work permits, Environmental Monitoring Project procedures and/or a Construction Traveler prepared by Fluor Fernald. All work performed on this project will be performed in accordance with applicable Environmental Monitoring project procedures, RM-0020 (Radiological Control Requirements Manual), RM-0021 (Safety Performance Requirements Manual), Fluor Fernald work permits. All personnel in the performance of their assigned duties require concurrence with applicable safety permits. Additional safety information can be found in the Soil and Disposal Facility Project Integrated Health and Safety Plan (20100-HS-0002). In addition to permits, procedures, and the requirements of this document, Fluor Fernald and any subcontractors will comply with all federal, state, and local requirements (e.g., OSHA).

Fluor Fernald managers and supervisors are responsible for ensuring that all field activities comply with the environmental Safety and Health (S&H) requirements and ensuring compliance with the Work Plan. All personnel have stop-work authority for imminent safety hazards resulting from noncompliance with the applicable S&H practices. S&H requirements and procedures for this plan will be governed by the Safety Performance Requirements Manual (RM-0021), site work permits, procedures, and the overall strategy discussed within this document.

Fluor Fernald will provide all radiological occupational monitoring, including Radiological Control Technicians (RCTs), to support remediation activities. The radiological work requirements for activities will be detailed in activity-specific Radiological Work Permits. Personnel performing work under a Radiological Work Permit will be briefed on the specific hazards and task requirements before work begins. Radiological control personnel will evaluate the data obtained from field surveys to determine the effectiveness of the radiological controls. Fluor Fernald will provide S&H coverage, including air sampling for non-radiological contaminants as required.

A walkdown of the area by representatives from SWP Characterization and other involved groups prior to the start of fieldwork shall be conducted to identify any hazards. Hazards must be corrected/controlled prior to the start of work. No operating heavy-duty equipment within a 50-foot buffer zone will be permitted during this sampling effort.

Personnel must be briefed to all plans prior to the start of work. This briefing will not participate in the execution of field activities. All personnel entering the area will obtain a pre-entry briefing on current activities or hazards that may affect their work. Additionally, prior to entry into an excavation, the Competent Person for Trenching and Excavation shall be contacted to assure that the daily inspection has been completed and the excavation is safe to enter.

All emergencies shall be reported immediately to the Site Communications Center at 648-6511 (if using a cellular phone), or using a radio and contacting "CONTROL" on Channel 2.

6.0 DISPOSITION OF WASTE

During sampling activities, field personnel may generate small amounts of soil, water, and contact waste. Excess soil generated during sample collection will be replaced in the borehole. Contact waste generation will be minimized by limiting contact with sample media, and by only using disposable materials that are necessary. Contact waste will be bagged for disposal in an uncontrolled area dumpster. Generation of decontamination waters will be minimized in the field. Decontamination water that is generated will be contained in a plastic bucket with a lid and returned to site for disposal. A wastewater discharge form must be completed for disposal. On-site decontamination of equipment will take place at a facility that discharges to the Advanced Wastewater Treatment Facility, either directly or indirectly, through the storm water collection system.

During completion of physical sampling activities, field personnel may generate small amounts of soil, sediment, water, and contact waste. According to WAO criteria, the Project Waste Identification Document (PWID) process will not be necessary for certification sampling. As a result, a PWID will not be developed.

Following analysis and agency approval of the Certification Report, remaining soil will be returned to A2PII and spread at the point of origin, if possible. The WAO contact should be consulted for disposition options if remaining soil cannot be returned to the point of origin. WAO should also be consulted in the event that additional significant waste volumes are generated.

7.0 DATA MANAGEMENT

A data management process will be implemented to collect and manage certification information collected during the investigation. As specified in Section 5.1 of the SCQ, daily activities will be recorded on the FAL, with sufficient detail to be able to reconstruct a particular situation without reliance on memory. Sample Collection Logs will be completed according to procedure ADM-02.

Electronically recorded data from the Geodimeter or Global Positioning System (GPS) will be downloaded to disks on a daily basis unless otherwise instructed. Survey team members will review the data for completeness and accuracy and then download it onto the Local Area Network (LAN). Once on the LAN, the Data Management Contact will perform an evaluation of the coordinate data. Once complete, the data will be sent to the loader, where it will be loaded onto the Oracle system and an error log will be generated. The data will then be made available to users through both the Geographical Information System (GIS) and Microsoft® Access Software. Survey field team members will retain all downloaded data on disk for future reference and archive.

Field documentation, such as the FAL, Geodimeter Survey Files, the Sample Collection Log, and the Sample Request/Sample Analysis Chain of Custody Log will undergo an internal QA/QC review by the field team members. Copies will then be generated and delivered to the Data Management Contact, who will perform an evaluation of the data and create the appropriate links between the electronically recorded data and the paper-generated data. The paper-generated data will be sent to data entry personnel for input into the SED. Field logs may be completed in the field and maintained in loose-leaf form. The QA validation team will validate field packages.

Analytical data from on-site and/or off-site laboratories will be reported in preliminary form to the Characterization Lead on at least a weekly basis. Analytical data will be entered into FACTS by Sample Data Management personnel. Analytical data that is designed for data validation will be forwarded to the Data Validation Group. Following required validation of the data for each sample release, the data from that release will be reported to the Characterization Lead in a summary data report format. All analytical data will be entered into the SED with the appropriate qualifier.

All records associated with this PSP should reference the PSP number and eventually be forwarded to Engineering/Construction Document Control to be placed in the project file.

REFERENCES

U.S. Department of Energy, 1998, "Sitewide Excavation Plan," Final, Fernald Environmental Management Project, DOE Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 1999a, "Certification Report for A2PIII – Part One" Final, Fernald Environmental Management Project, DOE Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 1999b, "Project Specific Plan for Predesign Sampling of area 2, Phase I Non-Waste Units and Part One of Area 2, Phase II," Revision 0, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 1999c, "Project Specific Plan for Predesign Investigation Sampling in Area 2, Phase II - Parts Two and Three," Revision 0, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 2000, "Data Quality Objectives for Sitewide Certification Sampling and Analysis," Revision 3, Fernald Environmental Management Project, DOE Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 2001, "Certification Report for Area 2, Phase II – Part 3 Soil Stockpile 3 Footprint," Final, Fernald Environmental Management Project, DOE Fernald Area Office, Cincinnati, Ohio.

U.S. Department of Energy, 2003, "Soil and Disposal Facility Project Integrated Health and Safety Plan," Revision 0, Fernald Closure Project, DOE Fernald Area Office, Cincinnati, Ohio.

APPENDIX A

Data Quality Objectives SL-052, Rev.3

Control Number _____

Fernald Environmental Management Project

Data Quality Objectives

Title: Sitewide Certification Sampling and Analysis

Number: SL-052

Revision: 3

Effective Date: March 13, 2000

Contact Name: Mike Rolfes

Approval: _____ Date: 3/13/00
James Chambers
DQO Coordinator

Approval: _____ Date: 3/13/00
J.D. Chiou
SCEP Project Director

Rev. #	0	1	2	3			
Effective Date:	4/28/99	6/10/99	2/3/00	3/13/00			

DATA QUALITY OBJECTIVES
Sitewide Certification Sampling and Analysis

Members of Data Quality Objectives (DQO) Scoping Team

The members of the scoping team included individuals with expertise in QA, analytical methods, field sampling, statistics, laboratory analytical methods and data management.

Conceptual Model of the Site

Soil sampling was conducted at the Fernald Environmental Management Project (FEMP) during the Operable Unit 5 (OU5) Remedial Investigation/Feasibility Study (RI/FS). Final Remediation Levels (FRLs) for constituents of concern (COCs), along with the extent of soil contaminated above the FRLs, were identified in the OU5 Record of Decision (ROD). Actual soil remediation activities now fall under the guidance of the final Sitewide Excavation Plan (SEP).

As outlined in the SEP, the FEMP has been divided into individual Remediation Areas (or phased areas within a Remediation Area) to sequentially carry out soil remedial activities. Under the strategy identified in the SEP, pre-design investigations are first conducted to better define the limits of soil excavation requirements. Following any necessary excavation, pre-certification real-time scanning activities are conducted to evaluate residual patterns of soil contamination. Pre-certification scan data should provide a level of assurance that the FRLs will be achieved. When pre-certification data indicate that remediation goals are likely to be met, they are used to define certification units (CUs) within the Remediation Area of interest. Table 2-9 of the final SEP identifies a list of area-specific COCs (ASCOCs) for each Remediation Area at the FEMP. Based on existing data and production knowledge, a subset of these ASCOCs are conservatively identified within each CU as potentially present in the CU. This suite of CU-specific COCs is the subset of the ASCOCs to be evaluated against the FRLs within that CU. At a minimum, the five primary radiological COCs (total uranium, radium-226, radium-228, thorium-228, thorium-232) will be retained as CU-specific COCs for certification of each CU.

Delineation and justification for the final CU boundaries, along with each corresponding suite of CU-specific ASCOCs is documented in a Certification Design Letter. Upon approval of the Certification Design Letter by the EPA, certification activities can begin. Section 3.4 of the final SEP presents the general certification strategy.

1.0 Statement of Problem

FEMP soil and potentially impacted adjacent off-property soil must be certified on a CU by CU basis for compliance with the FRLs of all CU-specific ASCOCs. The appropriate sampling, analytical and information management criteria must be developed to provide the required qualified data necessary to demonstrate attainment of certification statistical criteria. For every area undergoing certification, a sampling plan must be in place that will direct soil samples to be collected which are representative of the CU-specific COC concentrations within the framework of the certification approach identified in the final SEP. The appropriate analytical methodologies must be selected to provide the required data.

Exposure to Soil

The cleanup standards, or FRLs, were developed for a final site land use as an undeveloped park. Under this exposure scenario, receptors could be directly exposed to contaminated soil through dermal contact, external radiation, incidental ingestion, and/or inhalation of fugitive dust while visiting the park. Exposure to contaminated soil by the modeled receptor is expected to occur at random locations within the boundaries of the FEMP and would not be limited to any single area. Some soil FRLs were developed based on the modeled cross-media impact potential of soil contamination to the underlying aquifer. In these instances, potential exposure to contaminants would be indirect through the groundwater pathway, and not directly linked to soil exposure. Off-site soil FRLs were established at more conservative levels than the on-property soil FRLs, based on an agricultural receptor. Benchmark Toxicity Values (BTVs) are also being considered in the cleanup process by assessing habitat impact of individual BTVs under post-remedial conditions.

Available Resources

Time: Certification sampling will be accomplished by the field sampling team prior to interim or final regrading or release of soil for construction activities. The certification sampling schedule must allow sufficient time, in the event additional remediation is required, to demonstrate certification of FRLs prior to permanent construction or regrading. Certification sampling will have to be completed and analytical results validated and statistical analysis completed prior to submission of a Certification Report to the regulatory agencies.

Project Constraints: Certification sampling and analytical testing must be performed with existing manpower, materials and equipment to support the certification effort. Remediation areas are prioritized for certification sampling and analysis according to the date required for initiation of sequential construction activities in those areas. Fluor Daniel Fernald (FDF) and DOE must demonstrate post-remedial compliance with the CU-specific COC FRLs to release the designated Remediation Area for

planned interim grading, eventual restoration under the Natural Resources Restoration Plan (NRRP), and other final land use activities.

2.0 Identify the Decision

Decision

Demonstrate within each CU if all CU-specific COCs pass the certification criteria. These criteria are as follows: 1) The average concentration of each CU-specific COC is below the FRL and within the agreed upon confidence limits (95% for primary ASCOCs and 90% for secondary ASCOCs); and 2) the hot-spot criteria, that no result for any CU-specific COC is more than two times the associated soil FRL. The certification criteria are discussed in greater detail in Section 3.4.4 of the final SEP.

Possible Results

1. The average concentration of each CU-specific COC is demonstrated to be below the FRLs within the confidence level, with no single result for any CU-specific COC greater than two times the associated FRL. The CU can then be certified as attaining remediation goals.

2. The average concentration of at least one CU-specific COC is demonstrated to be above the FRL at the given confidence level. The CU will fail certification and require additional remedial action, per Section 3.4.5 of the final SEP.

3. If a result(s) of one or more CU-specific COC is demonstrated to be at or above two times the FRL, the CU will fail certification. The CU will fail certification and require additional remedial action per Section 3.4.5 of the final SEP. A combination of results 2 and 3 also constitutes certification failure.

3.0 Inputs That Affect the Decision

Required Information

Certification data will be obtained through physical soil sampling. Based on the certification analytical results, the average concentrations of each CU-specific COC with specified confidence levels will be calculated using the statistical methods identified in Appendix G of the final SEP.

Source of Information

Per the SEP, analysis of certification samples for each CU-specific COC will be conducted at analytical support level (ASL) D in accordance with methods and QA/QC standards in the FEMP Sitewide CERCLA Quality Assurance Project Plan [SCQ].

Contaminant-Specific Action Levels
The cleanup levels are the soil FRLs published in the OU5 and OU2 RODs. BTVs being considered in the remediation process are discussed for consideration during certification in Appendix C of the NRRP.

Methods of Sampling and Analysis
Physical soil samples will be collected in accordance with the applicable site sampling procedures. Per the SEP, laboratory analysis will be conducted at ASL D using QA/QC protocols specified in the SCQ. Full raw data deliverables will be required from the laboratory to allow for appropriate data validation. For FEMP-approved on- and off-site laboratories, the analytical method used will meet the required precision, accuracy and detection capabilities necessary to achieve FRL analyte ranges.

4.0 The Boundaries of the Situation

Spatial Boundaries
Domain of the Decision: The boundaries of this certification DQO extend to all surface, stockpile and fill soil in areas that are undergoing certification as part of FEMP remediation.

Population of Soil: Soil includes all excavated surfaces, undisturbed relatively unimpacted native soil, and sub-surface intervals (stockpile or fill areas only) in areas undergoing certification sampling and analysis.

Scale of Decision Making
Based on considerations of the final certification units and the COC evaluation process, the CU-specific COCs are determined. The area undergoing certification will be evaluated on a CU basis, based on physical sample results, as to whether it has passed or failed the criteria for attainment of certification (final SEP Section 3.4.4).

Temporal Boundaries
Time frame: Certification sampling must be performed in time to sequentially release certified areas for scheduled interim grading, restoration, and other final land use activities. Certification sampling data received from the laboratory will be validated and statistically evaluated. Certification results and findings will be documented in Certification Reports, which must be submitted to and approved by the regulatory agencies prior to release of the areas for scheduled interim grading, restoration, and other final land use activities.

Practical Considerations: Some areas undergoing remediation will not be accessible for certification sampling until decontamination/demolition and remedial excavation activities are complete. Other areas, such as wood lots, that are relatively uncontaminated and not planned for excavation, may require preparation, such as cutting of grass or removal of undergrowth prior to certification sampling, thus requiring coordination with FEMP Maintenance personnel.

5.0 Decision Rule

Successful certification of soil within the boundaries of a certification unit (CU) demonstrates that the certified soil (surface or subsurface) has concentrations of CU-specific COC(s) that meet the established criteria for attainment of Certification.

Parameters of Interest

The parameters of interest are the individual and average surface soil concentrations of CU-specific COCs and confidence limits on the calculated average within a CU. OU2 and OU5 ROD identify all applicable soil FRLs. The SEP identifies the ASCOCs, a subset of which will be used to establish CU-specific COCs within each Remediation Area undergoing certification sampling and analysis.

Action Levels

The applicable action levels are the on- and off-property soil FRLs published in the OU5 or OU2 ROD for each ASCOC.

Decision Rules

If the average concentration for each CU-specific COC is demonstrated to be below the FRLs within the agreed upon confidence level (95% for primary COCs; 90% for secondary COCs), and no analytical result exceeds two times the soil FRL, then the CU can be certified as complying with the cleanup criteria. If a CU does not meet the FRLs within the agreed upon confidence level for one or more CU-specific COCs, or one or more analytical results for one or more CU-specific COCs is greater than two times the associated soil FRL, then the CU fails certification and requires further assessment as per the SEP.

6.0 Limits on Decision Errors

Types of Decision Errors and Consequences

Definition

Decision Error 1: This decision error occurs when the decision maker decides that a CU has met the certification criteria, when in reality, the certification criteria have not been met. This situation could result in an increased risk to human health and the environment. In addition, this type of error could result in regulatory fees and penalties.

Decision Error 2: This decision error occurs when the decision maker decides a CU does not met the certification criteria, when actually, the certification criteria have been met. This error would result in unnecessary added costs due to the excavation of soil containing COC concentrations below their FRLs, and an increased volume of soil assigned to the OSDF. In addition, unnecessary delays in the remediation schedule may result.

True State of Nature for the Decision Errors

The true state of nature for Decision Error 1 is that the certification criteria are not met (average CU-specific COC concentrations not below the FRL within the specified confidence limits; or a single sample result above two times the FRL). The true state of nature for Decision Error 2 is that certification criteria are met (average CU-specific COC concentrations are below the FRL within the specified confidence limits, and no result is above two times the FRL). Decision Error 1 is the more severe error due to the potential threat this poses to human health and the environment.

Null Hypothesis

H_0: The average concentration of at least one CU-specific COC within a CU is equal to or greater than the associated FRL.

H_1: The average concentration of all CU-specific COCs within a CU is less than the action levels.

False Positive and False Negative Errors

A false positive is Decision Error 1: less than or equal to five percent ($p = .05$) is considered the acceptable decision error in determination of compliance with FRLs for primary ASCOCs, while ten percent ($p = .10$) is acceptable for secondary ASCOCs.

A false negative is Decision Error 2: less than or equal to 20 percent is considered the acceptable decision error. This decision error is controlled through the determination of sample sizes (see Section G.1.4.1 of the final SEP).

7.0 Design for Obtaining Quality Data

Section 3.4.2 of the final SEP presents the specifics of the certification sampling design. The following text describes the general certification sampling design.

Soil Sample Locations

In order to select certification sampling locations, each CU is divided into 16 approximately equal sub-CUs. Certification sample locations are then generated by randomly selecting an easting and northing coordinate within the boundaries of each cell. Additional alternative sample locations are also generated in case the original random sample location fails the minimum distance criterion. The minimum distance criterion is defined as the minimum distance allowed between random sample locations in order to eliminate the chance of random sample points clustering within a small area. This clustering would tend to over emphasize a small area and, conversely, under represent a large area in certification determination. By not allowing sample locations to be too closely arranged, the sample locations are spread out and provide a more uniform coverage, thus reducing the possibility of large unsampled areas. The equation for determining minimum distance criterion is presented in Section 3.4.2.1 of the SEP.

In the event that the original random sample location failed the minimum distance criterion, the first alternate location was selected and all the locations were retested. This process continued until all 16 random locations passed the minimum distance criteria.

Each CU is also divided into four quadrants, each of which contains 4 sub-CUs and 4 sample locations. Three of the four locations per quadrant (12 per CU) are then selected for sample collection and analysis. The other one per quadrant (4 per CU) are designated as "archives", and samples will not be collected and analyzed unless need arises due to analytical or validation problems warrant. Per Section 3.4.2 of the SEP, as few as 8 samples may be collected from Group 2 CUs for analysis of secondary COCs.

Physical Samples

Physical soil certification samples will be collected from the surface according to SMPL-01 at locations identified in the PSP (generally 12 of the 16 locations per CU).

If stockpiled soil is to be certified, two CUs will be established, on for the stockpile and one for the underlying soil (i.e., the "footprint"). To certify the stockpile, samples will be collected from predetermined random intervals from within the stockpiled soil at each certification sampling location identified in the PSP. To certify the footprint, the first 6-inches of native soil present at each sampling location will also be collected for certification. If fill soil is to be certified, the strategy (surface or sampling at depth) will be based on results from the precertification scan of the fill area(s), as discussed in the Certification Design Letter and the certification PSP.

Laboratory Analysis

As defined in the PSP, a minimum of 8 to 12 samples per CU will be submitted to the on-site laboratory or a FDF approved off-site laboratory for analysis. All certification analyses will meet ASL D requirements per the SCQ except for the HAMDC. Samples will be analyzed for all CU-specific ASCOCs, with minimum detection levels set according to the SCQ and applicable project guidelines.

Validation

All field data will be validated. Also, a minimum of 10 percent of the analytical data from each laboratory will be subject to analytical validation to ASL D requirements in the SCQ, and will require an ASL D package. The remaining analytical data will be validated to a minimum of ASL B, and will require an ASL B package.

8.0 Use of Data to Test Null Hypothesis

Appendix G of the final SEP discusses in detail, the statistical evaluations of certification data used to determine attainment of certification criteria.

Data Quality Objectives
Sitewide Certification Sampling and Analysis

1A. Task Description:

1B. Project Phase: (Put an X in the appropriate selection.)

RI☐ FS☐ RD☐ RA☒ RvA☐ Other (specify) _____

1C. DQO No.: SL-052, Rev. 2 DQO Reference No.: _____

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2. Media Characterization: (Put an X in the appropriate selection.)

Air☐ Biological☐ Groundwater☐ Sediment☒ Soil☒
Waste☐ Wastewater☐ Surface Water☐ Other (specify) _____

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3. Data Use with Ananlytical Support Level (A-E): (Put an X in the appropriate Analytical Support Level selection(s) beside each applicable data use)

Site Characterization A☐ B☐ C☐ D☐ E☐	Risk Assessment A☐ B☐ C☐ D☐ E☐
Evaluation of Alternatives A☐ B☐ C☐ D☐ E☐	Engineering Design A☐ B☐ C☐ D☐ E☐
Monitoring During Remediation A☐ B☐ C☐ D☐ E☐	Other A☐ B☐ C☐ D☒ E☐

4A. Drivers: Remediation Area Remedial Action Work Plans, Applicable or Relevant and Appropriate Requirements (ARARs) and Operable Unit 2 and Operable Unit 5 Records of Decision (ROD), Sitewide Excavation Plan (SEP).

4B. Objective: Confirmation that remediation areas at the FEMP, or adjacent off-property areas, have met certification criteria on a CU by CU basis.

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5. Site Information (Description):

The OU2 and OU5 RODs have identified areas at the FEMP that require soil remediation activities. The RODs specify that the soil in these areas will be demonstrated to be below the FRLs. Certification is necessary for all FEMP soil and some adjacent off-property soil to demonstrate that the residual soil does not contain COC contamination exceeding the FRL at a specified confidence level.

6A. Data Types with appropriate Analytical Support Level Equipment Selection and SCQ Reference: (Place an "X" to the right of the appropriate box or boxes selecting the type of analysis or analyses required. Then select the type of equipment to perform the analysis if appropriate. Please include a reference to the SCQ Section.)

1. pH	☐	2. Uranium	☒*	3. BTX	☐
Temperature	☐	Full Radiological	☒*	TPH	☐
Specific Conductance	☐	Metals	☒*	Oil/Grease	☐
Dissolved Oxygen	☐	Cyanide	☐		
Technetium-99	☒*	Silica	☐		
4. Cations	☐	5. VOA	☒*	6. Other (specify)	
Anions	☐	BNA	☐		
TOC	☐	PEST	☒*		
TCLP	☐	PCB	☒*		
CEC	☐	COD	☐		

* As identified in the area certification PSP

6.B. Equipment Selection and SCQ Reference:

Equipment Selection	Refer to SCQ Section
ASL A _____	SCQ Section _____
ASL B _____	SCQ Section _____
ASL C _____	SCQ Section _____
ASL D Per SCQ and PSP	SCQ Section Appendix G, Tbls. 1&3
ASL E Per PSP	SCQ Section Appendix H (final)

7A. Sampling Methods: (Put an X in the appropriate selection.)

Biased☐ Composite☐ Grab☒ Environmental☐ Grid☐
Intrusive☒ Non-Intrusive☐ Phased☐ Source☐ Random☒*
*Systematic random samples, selected one per cell and meeting the minimum distance criterion

7B. Sample Work Plan Reference: Project Specific Plan for the associated Remediation area Remedial Action Work Plan

Background samples: OU5 RI

7C. Sample Collection Reference: Associated PSP(s), SMPL-01

8. Quality Control Samples: (Put an X in the appropriate selection.)

8A. Field Quality Control Samples:

Trip Blanks	☒[1]	Container Blanks	☒
Field Blanks	☒[2]	Duplicate Samples	☒
Equipment Rinsate Blanks	☒	Split Samples	☒[3]
Preservative Blanks	☐	Performance Evaluation Samples	☐

Other (specify) _____

1) Collected for volatile organic sampling
2) As noted in the PSP
3) Split samples will be taken where required by the EPA

8B. Laboratory Quality Control Samples:

Method Blank	☒	Matrix Duplicate/Replicate	☒
Matrix Spike	☒	Surrogate Spikes	☒
Tracer Spike	☒	Other (specify) _____	

9. Other: Please identify any other germane information that may impact the data quality or gathering of this particular objective, task, or data use.

Sample density will be dependent upon the CU size (Group 1 [250'x250'] or Group 2 [500'x500']), as determined by historical and pre-certification scan data.

APPENDIX B

A2PII CU Samples, Coordinates and Identification

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
1	1-01	0 - 6"	A2P2-C1-1^1-RM	TAL A & B	1347160.59	480018.62
	1-02V	0 - 6"	A2P2-C1-2^1-RM-V	ARCHIVE	1347140.49	479954.14
	1-03	0 - 6"	A2P2-C1-3^1-RM	TAL A & B	1347185.5	479979.24
	1-04	0 - 6"	A2P2-C1-4^1-RM	TAL A & B	1347252.17	479926.95
	1-05	0 - 6"	A2P2-C1-5^1-RM	TAL A & B	1347084.05	479936.67
	1-06V	0 - 6"	A2P2-C1-6^1-RM-V	ARCHIVE	1347136.17	479913.29
	1-07	0 - 6"	A2P2-C1-7^1-RM	TAL A & B	1347189.89	479923.85
	1-08D	0 - 6"	A2P2-C1-8^1-RM	TAL A & B	1347209.09	479892.2
		0 - 6"	A2P2-C1-8^1-RM-D	TAL A & B		
	1-09	0 - 6"	A2P2-C1-9^1-RM	TAL A & B	1347059.09	479885.83
	1-10	0 - 6"	A2P2-C1-10^1-RM	TAL A & B	1347116.4	479837.63
	1-11V	0 - 6"	A2P2-C1-11^1-RM-V	ARCHIVE	1347070.42	479780.87
	1-12	0 - 6"	A2P2-C1-12^1-RM	TAL A & B	1347102.89	479799.97
	1-13	0 - 6"	A2P2-C1-13^1-RM	TAL A & B	1347213.63	479857.74
	1-14V	0 - 6"	A2P2-C1-14^1-RM-V	ARCHIVE	1347185.24	479818.26
	1-15	0 - 6"	A2P2-C1-15^1-RM	TAL A & B	1347126.68	479763.96
	1-16	0 - 6"	A2P2-C1-16^1-RM	TAL A & B	1347178.49	479753.78
2	2-01	0 - 6"	A2P2-C2-1^1-RM	TAL A & B	1347017.62	480051.62
	2-02V	0 - 6"	A2P2-C2-2^1-RM-V	ARCHIVE	1347110.92	480063.46
	2-03	0 - 6"	A2P2-C2-3^1-RM	TAL A & B	1347195.07	480036.63
	2-04	0 - 6"	A2P2-C2-4^1-RM	TAL A & B	1347258.6	480037.73
	2-05	0 - 6"	A2P2-C2-5^1-RM	TAL A & B	1346982.83	480019.61
	2-06D	0 - 6"	A2P2-C2-6^1-RM	TAL A & B	1347087.49	480028.89
		0 - 6"	A2P2-C2-6^1-RM-D	TAL A & B		
	2-07V	0 - 6"	A2P2-C2-7^1-RM-V	ARCHIVE	1347073.71	479981.14
	2-08	0 - 6"	A2P2-C2-8^1-RM	TAL A & B	1347014.34	479938.48
	2-09	0 - 6"	A2P2-C2-9^1-RM	TAL A & B	1346872.33	479898.18
	2-10V	0 - 6"	A2P2-C2-10^1-RM-V	ARCHIVE	1346908.68	479933.58
	2-11	0 - 6"	A2P2-C2-11^1-RM	TAL A & B	1346934.4	479955.21
	2-12	0 - 6"	A2P2-C2-12^1-RM	TAL A & B	1346991.32	479979.78
	2-13	0 - 6"	A2P2-C2-13^1-RM	TAL A & B	1346943.99	479903.19
	2-14V	0 - 6"	A2P2-C2-14^1-RM-V	ARCHIVE	1347011.58	479871.82
	2-15	0 - 6"	A2P2-C2-15^1-RM	TAL A & B	1346913.38	479840.7
	2-16	0 - 6"	A2P2-C2-16^1-RM	TAL A & B	1346988.38	479828.98
3	3-01	0 - 6"	A2P2-C3-1^1-RM	TAL A & B	1347299.72	480040.01
	3-02	0 - 6"	A2P2-C3-2^1-RM	TAL A & B	1347300.04	479974.25
	3-03	0 - 6"	A2P2-C3-3^1-RM	TAL A & B	1347362.83	479969.34
	3-04V	0 - 6"	A2P2-C3-4^1-RM-V	ARCHIVE	1347388.31	479928.78
	3-05	0 - 6"	A2P2-C3-5^1-RM	TAL A & B	1347284.93	479891.85
	3-06D	0 - 6"	A2P2-C3-6^1-RM	TAL A & B	1347363.25	479881.76
		0 - 6"	A2P2-C3-6^1-RM-D	TAL A & B		
	3-07	0 - 6"	A2P2-C3-7^1-RM	TAL A & B	1347281.86	479823.18
	3-08V	0 - 6"	A2P2-C3-8^1-RM-V	ARCHIVE	1347323.36	479821
	3-09	0 - 6"	A2P2-C3-9^1-RM	TAL A & B	1347395.03	479893.5
	3-10	0 - 6"	A2P2-C3-10^1-RM	TAL A & B	1347438.56	479914.6
	3-11V	0 - 6"	A2P2-C3-11^1-RM-V	ARCHIVE	1347399.82	479849.47
	3-12	0 - 6"	A2P2-C3-12^1-RM	TAL A & B	1347457	479843.84
	3-13	0 - 6"	A2P2-C3-13^1-RM	TAL A & B	1347503.74	479879.31
	3-14	0 - 6"	A2P2-C3-14^1-RM	TAL A & B	1347501.16	479845.21
	3-15V	0 - 6"	A2P2-C3-15^1-RM-V	ARCHIVE	1347563.74	479821.38
	3-16	0 - 6"	A2P2-C3-16^1-RM	TAL A & B	1347609.61	479830.57

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
4	4-01	0 - 6"	A2P2-C4-1^1-RM	TAL A & B	1346931.78	479793.05
	4-02	0 - 6"	A2P2-C4-2^1-RM	TAL A & B	1347031.71	479800.69
	4-03	0 - 6"	A2P2-C4-3^1-RM	TAL A & B	1347011.9	479758.58
	4-04V	0 - 6"	A2P2-C4-4^1-RM-V	ARCHIVE	1346983.59	479733.66
	4-05	0 - 6"	A2P2-C4-5^1-RM	TAL A & B	1347073.83	479721.84
	4-06V	0 - 6"	A2P2-C4-6^1-RM-V	ARCHIVE	1347157.3	479721.76
	4-07	0 - 6"	A2P2-C4-7^1-RM	TAL A & B	1347236.57	479724.68
	4-08	0 - 6"	A2P2-C4-8^1-RM	TAL A & B	1347204.73	479700.57
	4-09V	0 - 6"	A2P2-C4-9^1-RM-V	ARCHIVE	1347051.59	479688.92
	4-10	0 - 6"	A2P2-C4-10^1-RM	TAL A & B	1346995.25	479667.27
	4-11D	0 - 6"	A2P2-C4-11^1-RM	TAL A & B	1347063.41	479656.91
		0 - 6"	A2P2-C4-11^1-RM-D	TAL A & B		
	4-12	0 - 6"	A2P2-C4-12^1-RM	TAL A & B	1347074.45	479629.8
	4-13	0 - 6"	A2P2-C4-13^1-RM	TAL A & B	1347157.4	479669.28
	4-14V	0 - 6"	A2P2-C4-14^1-RM-V	ARCHIVE	1347203.96	479649
	4-15	0 - 6"	A2P2-C4-15^1-RM	TAL A & B	1347155.94	479627.99
	4-16	0 - 6"	A2P2-C4-16^1-RM	TAL A & B	1347235.02	479599.35
5	5-01	0 - 6"	A2P2-C5-1^1-RM	TAL A & B	1347276.9	479764.79
	5-02	0 - 6"	A2P2-C5-2^1-RM	TAL A & B	1347347.62	479763.34
	5-03	0 - 6"	A2P2-C5-3^1-RM	TAL A & B	1347279.5	479719.04
	5-04V	0 - 6"	A2P2-C5-4^1-RM-V	ARCHIVE	1347336.46	479724.59
	5-05	0 - 6"	A2P2-C5-5^1-RM	TAL A & B	1347425.04	479760.25
	5-06V	0 - 6"	A2P2-C5-6^1-RM-V	ARCHIVE	1347468.25	479753.16
	5-07	0 - 6"	A2P2-C5-7^1-RM	TAL A & B	1347535.28	479777.64
	5-08	0 - 6"	A2P2-C5-8^1-RM	TAL A & B	1347554.37	479729.43
	5-09	0 - 6"	A2P2-C5-9^1-RM	TAL A & B	1347396.86	479724.33
	5-10	0 - 6"	A2P2-C5-10^1-RM	TAL A & B	1347485.95	479719.97
	5-11	0 - 6"	A2P2-C5-11^1-RM	TAL A & B	1347480.35	479675.04
	5-12V	0 - 6"	A2P2-C5-12^1-RM-V	ARCHIVE	1347442.56	479645.39
	5-13	0 - 6"	A2P2-C5-13^1-RM	TAL A & B	1347268.75	479665.11
	5-14V	0 - 6"	A2P2-C5-14^1-RM-V	ARCHIVE	1347349.7	479650.47
	5-15D	0 - 6"	A2P2-C5-15^1-RM	TAL A & B	1347293.33	479607.99
		0 - 6"	A2P2-C5-15^1-RM-D	TAL A & B		
	5-16	0 - 6"	A2P2-C5-16^1-RM	TAL A & B	1347361.1	479616.08
6	6-1	0 - 6"	A2P2-C6-1^1-RM	TAL A & B	1347063.05	479532.94
	6-2V	0 - 6"	A2P2-C6-2^1-RM-V	ARCHIVE	1347099.08	479542.68
	6-3	0 - 6"	A2P2-C6-3^1-RM	TAL A & B	1347094.11	479503.66
	6-4	0 - 6"	A2P2-C6-4^1-RM	TAL A & B	1347101.38	479460.55
	6-5D	0 - 6"	A2P2-C6-5^1-RM	TAL A & B	1347159.57	479553.78
		0 - 6"	A2P2-C6-5^1-RM-D	TAL A & B		
	6-6	0 - 6"	A2P2-C6-6^1-RM	TAL A & B	1347200.54	479570.61
	6-7V	0 - 6"	A2P2-C6-7^1-RM-V	ARCHIVE	1347145.62	479491.2
	6-8	0 - 6"	A2P2-C6-8^1-RM	TAL A & B	1347203.17	479515.67
	6-9	0 - 6"	A2P2-C6-9^1-RM	TAL A & B	1347251.16	479570.52
	6-10	0 - 6"	A2P2-C6-10^1-RM	TAL A & B	1347316.9	479572.34
	6-11	0 - 6"	A2P2-C6-11^1-RM	TAL A & B	1347262.97	479523.68
	6-12V	0 - 6"	A2P2-C6-12^1-RM-V	ARCHIVE	1347221.43	479441.09
	6-13	0 - 6"	A2P2-C6-13^1-RM	TAL A & B	1347160.31	479443.35
	6-14	0 - 6"	A2P2-C6-14^1-RM	TAL A & B	1347120.62	479354.5
	6-15V	0 - 6"	A2P2-C6-15^1-RM-V	ARCHIVE	1347175.2	479376.52
	6-16	0 - 6"	A2P2-C6-16^1-RM	TAL A & B	1347157.65	479318.13

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
7	7-1	0 - 6"	A2P2-C7-1^1-RM	TAL A & B	1346902.62	479771.09
	7-2	0 - 6"	A2P2-C7-2^1-RM	TAL A & B	1346881.09	479711.48
	7-3D	0 - 6"	A2P2-C7-3^1-RM	TAL A & B	1346920.66	479715.8
		0 - 6"	A2P2-C7-3^1-RM-D	TAL A & B		
	7-4V	0 - 6"	A2P2-C7-4^1-RM-V	ARCHIVE	1346819.32	479587.7
	7-5V	0 - 6"	A2P2-C7-5^1-RM-V	ARCHIVE	1346865.26	479644.04
	7-6	0 - 6"	A2P2-C7-6^1-RM	TAL A & B	1346916.45	479659.68
	7-7	0 - 6"	A2P2-C7-7^1-RM	TAL A & B	1346959.59	479637.5
	7-8	0 - 6"	A2P2-C7-8^1-RM	TAL A & B	1346981.34	479521.75
	7-9V	0 - 6"	A2P2-C7-9^1-RM-V	ARCHIVE	1346808.02	479521.5
	7-10	0 - 6"	A2P2-C7-10^1-RM	TAL A & B	1346862.69	479536.32
	7-11	0 - 6"	A2P2-C7-11^1-RM	TAL A & B	1346924.44	479539.62
	7-12	0 - 6"	A2P2-C7-12^1-RM	TAL A & B	1346960.76	479499.74
	7-13	0 - 6"	A2P2-C7-13^1-RM	TAL A & B	1346862.59	479460.25
	7-14	0 - 6"	A2P2-C7-14^1-RM	TAL A & B	1346908.87	479482.88
	7-15	0 - 6"	A2P2-C7-15^1-RM	TAL A & B	1346979.35	479444.45
	7-16V	0 - 6"	A2P2-C7-16^1-RM-V	ARCHIVE	1346910.87	479444.84
8	8-01	0 - 6"	A2P2-C8-1^1-RM	TAL A & B	1346752.97	479890.1
	8-02V	0 - 6"	A2P2-C8-2^1-RM-V	ARCHIVE	1346804.8	479918.9
	8-03	0 - 6"	A2P2-C8-3^1-RM	TAL A & B	1346777.28	479815.89
	8-04	0 - 6"	A2P2-C8-4^1-RM	TAL A & B	1346843.88	479824.75
	8-05V	0 - 6"	A2P2-C8-5^1-RM-V	ARCHIVE	1346834.78	479772.53
	8-06	0 - 6"	A2P2-C8-6^1-RM	TAL A & B	1346811.71	479729.97
	8-07	0 - 6"	A2P2-C8-7^1-RM	TAL A & B	1346785.16	479708.17
	8-08	0 - 6"	A2P2-C8-8^1-RM	TAL A & B	1346779.98	479666.85
	8-09	0 - 6"	A2P2-C8-9^1-RM	TAL A & B	1346645.28	479629.61
	8-10V	0 - 6"	A2P2-C8-10^1-RM-V	ARCHIVE	1346733.01	479661.9
	8-11	0 - 6"	A2P2-C8-11^1-RM	TAL A & B	1346721.51	479586.66
	8-12	0 - 6"	A2P2-C8-12^1-RM	TAL A & B	1346783.87	479592.84
	8-13V	0 - 6"	A2P2-C8-13^1-RM-V	ARCHIVE	1346737.85	479531.15
	8-14D	0 - 6"	A2P2-C8-14^1-RM	TAL A & B	1346788.35	479527.46
		0 - 6"	A2P2-C8-14^1-RM-D	TAL A & B		
	8-15	0 - 6"	A2P2-C8-15^1-RM	TAL A & B	1346663.32	479471.52
	8-16	0 - 6"	A2P2-C8-16^1-RM	TAL A & B	1346809	479471.75
9	9-01	0 - 6"	A2P2-C9-1^1-RM	TAL A & B	1346739.95	479929.37
	9-02	0 - 6"	A2P2-C9-2^1-RM	TAL A & B	1346756.19	479843.44
	9-03	0 - 6"	A2P2-C9-3^1-RM	TAL A & B	1346718.34	479816.29
	9-04V	0 - 6"	A2P2-C9-4^1-RM-V	ARCHIVE	1346643.46	479788.93
	9-05	0 - 6"	A2P2-C9-5^1-RM	TAL A & B	1346538.09	479780.69
	9-06V	0 - 6"	A2P2-C9-6^1-RM-V	ARCHIVE	1346601.92	479808.46
	9-07D	0 - 6"	A2P2-C9-7^1-RM	TAL A & B	1346520.7	479753.34
		0 - 6"	A2P2-C9-7^1-RM-D	TAL A & B		
	9-08	0 - 6"	A2P2-C9-8^1-RM	TAL A & B	1346595.08	479748.02
	9-09	0 - 6"	A2P2-C9-9^1-RM	TAL A & B	1346656.55	479748.44
	9-10	0 - 6"	A2P2-C9-10^1-RM	TAL A & B	1346702.06	479781.55
	9-11	0 - 6"	A2P2-C9-11^1-RM	TAL A & B	1346745.17	479756.06
	9-12V	0 - 6"	A2P2-C9-12^1-RM-V	ARCHIVE	1346734.3	479720.7
	9-13V	0 - 6"	A2P2-C9-13^1-RM-V	ARCHIVE	1346478.96	479714.89
	9-14	0 - 6"	A2P2-C9-14^1-RM	TAL A & B	1346539.57	479715.11
	9-15	0 - 6"	A2P2-C9-15^1-RM	TAL A & B	1346602.29	479706.69
	9-16	0 - 6"	A2P2-C9-16^1-RM	TAL A & B	1346658.67	479674.56

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
10	10-01V	0 - 6"	A2P2-C10-1^1-RM-V	ARCHIVE	1346461.05	479605.31
	10-02	0 - 6"	A2P2-C10-2^1-RM	TAL A & B	1346502.3	479657.13
	10-03	0 - 6"	A2P2-C10-3^1-RM	TAL A & B	1346577.39	479625.48
	10-04	0 - 6"	A2P2-C10-4^1-RM	TAL A & B	1346631.63	479577.8
	10-05	0 - 6"	A2P2-C10-5^1-RM	TAL A & B	1346454.19	479573.11
	10-06	0 - 6"	A2P2-C10-6^1-RM	TAL A & B	1346507.35	479569.75
	10-07V	0 - 6"	A2P2-C10-7^1-RM-V	ARCHIVE	1346478.92	479538.91
	10-08	0 - 6"	A2P2-C10-8^1-RM	TAL A & B	1346527.47	479515.28
	10-09V	0 - 6"	A2P2-C10-9^1-RM-V	ARCHIVE	1346578.96	479560.11
	10-10	0 - 6"	A2P2-C10-10^1-RM	TAL A & B	1346579.9	479529.06
	10-11	0 - 6"	A2P2-C10-11^1-RM	TAL A & B	1346614	479539.14
	10-12	0 - 6"	A2P2-C10-12^1-RM	TAL A & B	1346665.72	479539.99
	10-13D	0 - 6"	A2P2-C10-13^1-RM	TAL A & B	1346473.73	479472.71
		0 - 6"	A2P2-C10-13^1-RM-D	TAL A & B		
	10-14	0 - 6"	A2P2-C10-14^1-RM	TAL A & B	1346521.59	479478.48
	10-15V	0 - 6"	A2P2-C10-15^1-RM-V	ARCHIVE	1346570.39	479464.92
	10-16	0 - 6"	A2P2-C10-16^1-RM	TAL A & B	1346622.39	479457.53
11	11-01	0 - 6"	A2P2-C11-1^1-RM	TAL A & B	1346506.27	479391.92
	11-02V	0 - 6"	A2P2-C11-2^1-RM-V	ARCHIVE	1346584.25	479393.79
	11-03	0 - 6"	A2P2-C11-3^1-RM	TAL A & B	1346615.1	479391.33
	11-04	0 - 6"	A2P2-C11-4^1-RM	TAL A & B	1346539.65	479339.92
	11-05	0 - 6"	A2P2-C11-5^1-RM	TAL A & B	1346667	479416.83
	11-06D	0 - 6"	A2P2-C11-6^1-RM	TAL A & B	1346623.02	479323.69
		0 - 6"	A2P2-C11-6^1-RM-D	TAL A & B		
	11-07	0 - 6"	A2P2-C11-7^1-RM	TAL A & B	1346690.59	479354.34
	11-08V	0 - 6"	A2P2-C11-8^1-RM-V	ARCHIVE	1346645.3	479291.01
	11-09	0 - 6"	A2P2-C11-9^1-RM	TAL A & B	1346560.45	479297.37
	11-10	0 - 6"	A2P2-C11-10^1-RM	TAL A & B	1346632.53	479235.44
	11-11V	0 - 6"	A2P2-C11-11^1-RM-V	ARCHIVE	1346706.55	479192.55
	11-12	0 - 6"	A2P2-C11-12^1-RM	TAL A & B	1346739.46	479167.06
	11-13	0 - 6"	A2P2-C11-13^1-RM	TAL A & B	1346707.55	479152.67
	11-14	0 - 6"	A2P2-C11-14^1-RM	TAL A & B	1346747.27	479117.31
	11-15V	0 - 6"	A2P2-C11-15^1-RM-V	ARCHIVE	1346783.85	479066.95
	11-16	0 - 6"	A2P2-C11-16^1-RM	TAL A & B	1346820.3	479054.42
12	12-01	0 - 6"	A2P2-C12-1^1-RM	TAL A & B	1346740.08	479428.99
	12-02	0 - 6"	A2P2-C12-2^1-RM	TAL A & B	1346766.08	479397.94
	12-03V	0 - 6"	A2P2-C12-3^1-RM-V	ARCHIVE	1346731.82	479333.38
	12-04	0 - 6"	A2P2-C12-4^1-RM	TAL A & B	1346779.92	479320.03
	12-05D	0 - 6"	A2P2-C12-5^1-RM	TAL A & B	1346811.55	479398.57
		0 - 6"	A2P2-C12-5^1-RM-D	TAL A & B		
	12-06	0 - 6"	A2P2-C12-6^1-RM	TAL A & B	1346887.88	479380.49
	12-07V	0 - 6"	A2P2-C12-7^1-RM-V	ARCHIVE	1346831.29	479331.96
	12-08	0 - 6"	A2P2-C12-8^1-RM	TAL A & B	1346875.63	479319.22
	12-09	0 - 6"	A2P2-C12-9^1-RM	TAL A & B	1346699.23	479292.46
	12-10	0 - 6"	A2P2-C12-10^1-RM	TAL A & B	1346753.21	479263.27
	12-11	0 - 6"	A2P2-C12-11^1-RM	TAL A & B	1346717.23	479234.08
	12-12V	0 - 6"	A2P2-C12-12^1-RM-V	ARCHIVE	1346763.82	479194.41
	12-13	0 - 6"	A2P2-C12-13^1-RM	TAL A & B	1346835.62	479256.1
	12-14	0 - 6"	A2P2-C12-14^1-RM	TAL A & B	1346882.08	479268.45
	12-15V	0 - 6"	A2P2-C12-15^1-RM-V	ARCHIVE	1346842.56	479209.44
	12-16	0 - 6"	A2P2-C12-16^1-RM	TAL A & B	1346892.88	479223.01

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
13	13-01D	0 - 6"	A2P2-C13-1^1-RM	TAL A & B	1347038.73	479473.65
		0 - 6"	A2P2-C13-1^1-RM-D	TAL A & B		
	13-02	0 - 6"	A2P2-C13-2^1-RM	TAL A & B	1346972.93	479400.87
	13-03V	0 - 6"	A2P2-C13-3^1-RM-V	ARCHIVE	1347048.7	479414.03
	13-04	0 - 6"	A2P2-C13-4^1-RM	TAL A & B	1347067.83	479378.06
	13-05	0 - 6"	A2P2-C13-5^1-RM	TAL A & B	1346935.49	479361.87
	13-06V	0 - 6"	A2P2-C13-6^1-RM-V	ARCHIVE	1346996.61	479339.19
	13-07	0 - 6"	A2P2-C13-7^1-RM	TAL A & B	1346918.02	479264.96
	13-08	0 - 6"	A2P2-C13-8^1-RM	TAL A & B	1346970.48	479277.1
	13-09	0 - 6"	A2P2-C13-9^1-RM	TAL A & B	1347019.71	479317.82
	13-10V	0 - 6"	A2P2-C13-10^1-RM-V	ARCHIVE	1347029.82	479260.46
	13-11	0 - 6"	A2P2-C13-11^1-RM	TAL A & B	1347110.93	479295.43
	13-12	0 - 6"	A2P2-C13-12^1-RM	TAL A & B	1347145.39	479206.21
	13-13	0 - 6"	A2P2-C13-13^1-RM	TAL A & B	1346932.62	479221.79
	13-14	0 - 6"	A2P2-C13-14^1-RM	TAL A & B	1346977.87	479217.69
	13-15V	0 - 6"	A2P2-C13-15^1-RM-V	ARCHIVE	1347048.2	479198.58
	13-16	0 - 6"	A2P2-C13-16^1-RM	TAL A & B	1347103.93	479211.13
14	14-01V	0 - 6"	A2P2-C14-1^1-RM-V	ARCHIVE	1346826.41	479941.01
	14-02	0 - 6"	A2P2-C14-2^1-RM	TAL A & B	1346859.42	479883.54
	14-03	0 - 6"	A2P2-C14-3^1-RM	TAL A & B	1346889.15	479839.36
	14-04	0 - 6"	A2P2-C14-4^1-RM	TAL A & B	1346905.91	479803.26
	14-05D	0 - 6"	A2P2-C14-5^1-RM	TAL A & B	1346949.06	479736.75
		0 - 6"	A2P2-C14-5^1-RM-D	TAL A & B		
	14-06	0 - 6"	A2P2-C14-6^1-RM	TAL A & B	1346953.57	479711.25
	14-07V	0 - 6"	A2P2-C14-7^1-RM-V	ARCHIVE	1346967.96	479678.58
	14-08	0 - 6"	A2P2-C14-8^1-RM	TAL A & B	1346990.6	479639.53
	14-09V	0 - 6"	A2P2-C14-9^1-RM-V	ARCHIVE	1346999.28	479610.64
	14-10	0 - 6"	A2P2-C14-10^1-RM	TAL A & B	1347011.97	479571.41
	14-11	0 - 6"	A2P2-C14-11^1-RM	TAL A & B	1347051.46	479495.47
	14-12	0 - 6"	A2P2-C14-12^1-RM	TAL A & B	1347073.76	479446.27
	14-13	0 - 6"	A2P2-C14-13^1-RM	TAL A & B	1347097.31	479375.78
	14-14V	0 - 6"	A2P2-C14-14^1-RM-V	ARCHIVE	1347116.43	479330.98
	14-15	0 - 6"	A2P2-C14-15^1-RM	TAL A & B	1347135.1	479283.29
	14-16	0 - 6"	A2P2-C14-16^1-RM	TAL A & B	1347150.36	479237.27
15	15-01D	0 - 6"	A2P2-C15-1^1-RM	TAL A & B	1346818.66	479125.76
		0 - 6"	A2P2-C15-1^1-RM-D	TAL A & B		
	15-02V	0 - 6"	A2P2-C15-2^1-RM-V	ARCHIVE	1346852.64	479142.21
	15-03	0 - 6"	A2P2-C15-3^1-RM	TAL A & B	1346852.35	479103.97
	15-04	0 - 6"	A2P2-C15-4^1-RM	TAL A & B	1346878.6	479060.81
	15-05V	0 - 6"	A2P2-C15-5^1-RM-V	ARCHIVE	1346948.01	479141.82
	15-06	0 - 6"	A2P2-C15-6^1-RM	TAL A & B	1347005.44	479139.37
	15-07	0 - 6"	A2P2-C15-7^1-RM	TAL A & B	1346934.01	479085.28
	15-08	0 - 6"	A2P2-C15-8^1-RM	TAL A & B	1346989.75	479088.58
	15-09V	0 - 6"	A2P2-C15-9^1-RM-V	ARCHIVE	1347051.57	479165.48
	15-10	0 - 6"	A2P2-C15-10^1-RM	TAL A & B	1347085.7	479143.08
	15-11	0 - 6"	A2P2-C15-11^1-RM	TAL A & B	1347166.01	479159.13
	15-12	0 - 6"	A2P2-C15-12^1-RM	TAL A & B	1347033.65	479105.04
	15-13V	0 - 6"	A2P2-C15-13^1-RM-V	ARCHIVE	1347102.04	479104.85
	15-14	0 - 6"	A2P2-C15-14^1-RM	TAL A & B	1347005.94	479041.3
	15-15	0 - 6"	A2P2-C15-15^1-RM	TAL A & B	1347037.47	479048.3
	15-16	0 - 6"	A2P2-C15-16^1-RM	TAL A & B	1347110.26	479067.51

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
16	16-01V	0 - 6"	A2P2-C16-1^1-RM-V	ARCHIVE	1346822.94	479021.53
	16-02	0 - 6"	A2P2-C16-2^1-RM	TAL A & B	1346860.44	479011.26
	16-03	0 - 6"	A2P2-C16-3^1-RM	TAL A & B	1346894.02	478967.06
	16-04	0 - 6"	A2P2-C16-4^1-RM	TAL A & B	1346868.71	478950.2
	16-05	0 - 6"	A2P2-C16-5^1-RM	TAL A & B	1346916.22	479002.84
	16-06	0 - 6"	A2P2-C16-6^1-RM	TAL A & B	1346928.19	478957.41
	16-07V	0 - 6"	A2P2-C16-7^1-RM-V	ARCHIVE	1346999.67	478948.38
	16-08	0 - 6"	A2P2-C16-8^1-RM	TAL A & B	1346902.68	478894.49
	16-09V	0 - 6"	A2P2-C16-9^1-RM-V	ARCHIVE	1346961.64	479001.41
	16-10	0 - 6"	A2P2-C16-10^1-RM	TAL A & B	1346976.76	478973.45
	16-11	0 - 6"	A2P2-C16-11^1-RM	TAL A & B	1347020.49	478981.9
	16-12	0 - 6"	A2P2-C16-12^1-RM	TAL A & B	1347064.17	478963.19
	16-13	0 - 6"	A2P2-C16-13^1-RM	TAL A & B	1347074.91	478984.78
	16-14V	0 - 6"	A2P2-C16-14^1-RM-V	ARCHIVE	1347115.67	479030.43
	16-15D	0 - 6"	A2P2-C16-15^1-RM	TAL A & B	1347138.17	479008.64
		0 - 6"	A2P2-C16-15^1-RM-D	TAL A & B		
	16-16	0 - 6"	A2P2-C16-16^1-RM	TAL A & B	1347170.88	479045.45
17	17-01	0 - 6"	A2P2-C17-1^1-RM	TAL A & B	1347176.26	479007.21
	17-02	0 - 6"	A2P2-C17-2^1-RM	TAL A & B	1347062.35	478929.34
	17-03V	0 - 6"	A2P2-C17-3^1-RM-V	ARCHIVE	1347131.09	478939.15
	17-04	0 - 6"	A2P2-C17-4^1-RM	TAL A & B	1347166.78	478950.67
	17-05V	0 - 6"	A2P2-C17-5^1-RM-V	ARCHIVE	1346922.21	478883.6
	17-06	0 - 6"	A2P2-C17-6^1-RM	TAL A & B	1346964.21	478879.5
	17-07	0 - 6"	A2P2-C17-7^1-RM	TAL A & B	1347015.29	478912.61
	17-08	0 - 6"	A2P2-C17-8^1-RM	TAL A & B	1346969.69	478817.41
	17-09D	0 - 6"	A2P2-C17-9^1-RM	TAL A & B	1347079.17	478879.52
		0 - 6"	A2P2-C17-9^1-RM-D	TAL A & B		
	17-10	0 - 6"	A2P2-C17-10^1-RM	TAL A & B	1347105.13	478906.46
	17-11V	0 - 6"	A2P2-C17-11^1-RM-V	ARCHIVE	1347188.96	478904.01
	17-12	0 - 6"	A2P2-C17-12^1-RM	TAL A & B	1347228.5	478863.52
	17-13	0 - 6"	A2P2-C17-13^1-RM	TAL A & B	1347018.44	478838.39
	17-14V	0 - 6"	A2P2-C17-14^1-RM-V	ARCHIVE	1347078.36	478831.62
	17-15	0 - 6"	A2P2-C17-15^1-RM	TAL A & B	1347128.96	478839.65
	17-16	0 - 6"	A2P2-C17-16^1-RM	TAL A & B	1347177.91	478806.97
18	18-01	0 - 6"	A2P2-C18-1^1-RM	TAL A & B	1346905.29	478727.77
	18-02V	0 - 6"	A2P2-C18-2^1-RM-V	ARCHIVE	1346941.59	478794.79
	18-03	0 - 6"	A2P2-C18-3^1-RM	TAL A & B	1346886.81	478702.68
	18-04D	0 - 6"	A2P2-C18-4^1-RM	TAL A & B	1346934.61	478689.12
		0 - 6"	A2P2-C18-4^1-RM-D	TAL A & B		
	18-05V	0 - 6"	A2P2-C18-5^1-RM-V	ARCHIVE	1346991.57	478786.79
	18-06	0 - 6"	A2P2-C18-6^1-RM	TAL A & B	1347066.38	478797.08
	18-07	0 - 6"	A2P2-C18-7^1-RM	TAL A & B	1346992.2	478732.51
	18-08	0 - 6"	A2P2-C18-8^1-RM	TAL A & B	1347025.56	478719.57
	18-09	0 - 6"	A2P2-C18-9^1-RM	TAL A & B	1346910.44	478644.5
	18-10	0 - 6"	A2P2-C18-10^1-RM	TAL A & B	1346942.91	478637.52
	18-11V	0 - 6"	A2P2-C18-11^1-RM-V	ARCHIVE	1346881.61	478612.22
	18-12	0 - 6"	A2P2-C18-12^1-RM	TAL A & B	1346943.45	478561.66
	18-13	0 - 6"	A2P2-C18-13^1-RM	TAL A & B	1346987.91	478635.48
	18-14	0 - 6"	A2P2-C18-14^1-RM	TAL A & B	1347046.65	478651.72
	18-15	0 - 6"	A2P2-C18-15^1-RM	TAL A & B	1346999.14	478599.49
	18-16V	0 - 6"	A2P2-C18-16^1-RM-V	ARCHIVE	1347033.67	478569.49

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
19	19-01V	0 - 6"	A2P2-C19-1^1-RM-V	ARCHIVE	1346890.87	478843.3
	19-02D	0 - 6"	A2P2-C19-2^1-RM	TAL A & B	1346852.85	478710.69
		0 - 6"	A2P2-C19-2^1-RM-D	TAL A & B		
	19-03	0 - 6"	A2P2-C19-3^1-RM	TAL A & B	1346831.83	478666.97
	19-04	0 - 6"	A2P2-C19-4^1-RM	TAL A & B	1346841.3	478624.55
	19-05	0 - 6"	A2P2-C19-5^1-RM	TAL A & B	1346757.14	478617.54
	19-06	0 - 6"	A2P2-C19-6^1-RM	TAL A & B	1346788.29	478586.3
	19-07	0 - 6"	A2P2-C19-7^1-RM	TAL A & B	1346749.69	478543.12
	19-08V	0 - 6"	A2P2-C19-8^1-RM-V	ARCHIVE	1346781.03	478532.02
	19-09V	0 - 6"	A2P2-C19-9^1-RM-V	ARCHIVE	1346837.59	478557.94
	19-10	0 - 6"	A2P2-C19-10^1-RM	TAL A & B	1346901.39	478541.92
	19-11	0 - 6"	A2P2-C19-11^1-RM	TAL A & B	1346901.67	478512.25
	19-12	0 - 6"	A2P2-C19-12^1-RM	TAL A & B	1346950.6	478502.04
	19-13V	0 - 6"	A2P2-C19-13^1-RM-V	ARCHIVE	1346691.37	478508.57
	19-14	0 - 6"	A2P2-C19-14^1-RM	TAL A & B	1346740.28	478476.1
	19-15	0 - 6"	A2P2-C19-15^1-RM	TAL A & B	1346773.28	478473.22
	19-16	0 - 6"	A2P2-C19-16^1-RM	TAL A & B	1346865.72	478490.31
20	20-01	0 - 6"	A2P2-C20-1^1-RM	TAL A & B	1346654.97	478423.04
	20-02	0 - 6"	A2P2-C20-2^1-RM	TAL A & B	1346713.95	478445.25
	20-03	0 - 6"	A2P2-C20-3^1-RM	TAL A & B	1346691.66	478410.37
	20-04V	0 - 6"	A2P2-C20-4^1-RM-V	ARCHIVE	1346620.09	478363.2
	20-05	0 - 6"	A2P2-C20-5^1-RM	TAL A & B	1346752.96	478457.18
	20-06	0 - 6"	A2P2-C20-6^1-RM	TAL A & B	1346793.98	478462.33
	20-07V	0 - 6"	A2P2-C20-7^1-RM-V	ARCHIVE	1346746.37	478381.59
	20-08	0 - 6"	A2P2-C20-8^1-RM	TAL A & B	1346805.27	478385.45
	20-09V	0 - 6"	A2P2-C20-9^1-RM-V	ARCHIVE	1346598.54	478308.03
	20-10	0 - 6"	A2P2-C20-10^1-RM	TAL A & B	1346629.16	478325.58
	20-11D	0 - 6"	A2P2-C20-11^1-RM	TAL A & B	1346687.32	478360.75
		0 - 6"	A2P2-C20-11^1-RM-D	TAL A & B		
	20-12	0 - 6"	A2P2-C20-12^1-RM	TAL A & B	1346672.57	478287.77
	20-13	0 - 6"	A2P2-C20-13^1-RM	TAL A & B	1346754.39	478328.9
	20-14	0 - 6"	A2P2-C20-14^1-RM	TAL A & B	1346800.42	478339.32
	20-15	0 - 6"	A2P2-C20-15^1-RM	TAL A & B	1346716.4	478285.31
	20-16V	0 - 6"	A2P2-C20-16^1-RM-V	ARCHIVE	1346793.92	478308.35
21	21-01	0 - 6"	A2P2-C21-1^1-RM	TAL A & B	1346877.82	478438.71
	21-02	0 - 6"	A2P2-C21-2^1-RM	TAL A & B	1346946.19	478454.35
	21-03V	0 - 6"	A2P2-C21-3^1-RM-V	ARCHIVE	1346850.42	478379.29
	21-04	0 - 6"	A2P2-C21-4^1-RM	TAL A & B	1346936.28	478416.11
	21-05	0 - 6"	A2P2-C21-5^1-RM	TAL A & B	1346987.34	478464.84
	21-06	0 - 6"	A2P2-C21-6^1-RM	TAL A & B	1346966.19	478400.69
	21-07V	0 - 6"	A2P2-C21-7^1-RM-V	ARCHIVE	1346970.12	478331.21
	21-08	0 - 6"	A2P2-C21-8^1-RM	TAL A & B	1347038.59	478354.25
	21-09	0 - 6"	A2P2-C21-9^1-RM	TAL A & B	1346869.83	478346.19
	21-10V	0 - 6"	A2P2-C21-10^1-RM-V	ARCHIVE	1346925.18	478369.03
	21-11	0 - 6"	A2P2-C21-11^1-RM	TAL A & B	1346869.36	478306.31
	21-12	0 - 6"	A2P2-C21-12^1-RM	TAL A & B	1346926.88	478296.04
	21-13	0 - 6"	A2P2-C21-13^1-RM	TAL A & B	1346973.53	478304.28
	21-14	0 - 6"	A2P2-C21-14^1-RM	TAL A & B	1346993.79	478282.08
	21-15V	0 - 6"	A2P2-C21-15^1-RM-V	ARCHIVE	1347066.83	478325.47
	21-16D	0 - 6"	A2P2-C21-16^1-RM	TAL A & B	1347141.75	478281.62
		0 - 6"	A2P2-C21-16^1-RM-D	TAL A & B		

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
22	22-01V	0 - 6"	A2P2-C22-1^1-RM-V	ARCHIVE	1346972.09	478526.78
	22-02	0 - 6"	A2P2-C22-2^1-RM	TAL A & B	1347019.52	478523.23
	22-03	0 - 6"	A2P2-C22-3^1-RM	TAL A & B	1347094.27	478552.65
	22-04	0 - 6"	A2P2-C22-4^1-RM	TAL A & B	1347021.58	478482.12
	22-05	0 - 6"	A2P2-C22-5^1-RM	TAL A & B	1347116.8	478525.1
	22-06V	0 - 6"	A2P2-C22-6^1-RM-V	ARCHIVE	1347163.66	478530.25
	22-07	0 - 6"	A2P2-C22-7^1-RM	TAL A & B	1347135.14	478449.66
	22-08	0 - 6"	A2P2-C22-8^1-RM	TAL A & B	1347162.64	478467.34
	22-09D	0 - 6"	A2P2-C22-9^1-RM	TAL A & B	1347067.8	478487.47
		0 - 6"	A2P2-C22-9^1-RM-D	TAL A & B		
	22-10	0 - 6"	A2P2-C22-10^1-RM	TAL A & B	1347043.58	478416.54
	22-11V	0 - 6"	A2P2-C22-11^1-RM-V	ARCHIVE	1347092.37	478426.01
	22-12	0 - 6"	A2P2-C22-12^1-RM	TAL A & B	1347078.33	478358.37
	22-13	0 - 6"	A2P2-C22-13^1-RM	TAL A & B	1347145.53	478414.71
	22-14V	0 - 6"	A2P2-C22-14^1-RM-V	ARCHIVE	1347184.8	478373.19
	22-15	0 - 6"	A2P2-C22-15^1-RM	TAL A & B	1347172.72	478331.66
	22-16	0 - 6"	A2P2-C22-16^1-RM	TAL A & B	1347178.55	478294.59
23	23-01	0 - 6"	A2P2-C23-1^1-RM	TAL A & B	1347092.86	478755.15
	23-02V	0 - 6"	A2P2-C23-2^1-RM-V	ARCHIVE	1347132.26	478751.66
	23-03	0 - 6"	A2P2-C23-3^1-RM	TAL A & B	1347119.8	478708.9
	23-04	0 - 6"	A2P2-C23-4^1-RM	TAL A & B	1347150.65	478708.49
	23-05D	0 - 6"	A2P2-C23-5^1-RM	TAL A & B	1347188.68	478762.77
		0 - 6"	A2P2-C23-5^1-RM-D	TAL A & B		
	23-06V	0 - 6"	A2P2-C23-6^1-RM-V	ARCHIVE	1347258.29	478730.72
	23-07	0 - 6"	A2P2-C23-7^1-RM	TAL A & B	1347190.41	478694.72
	23-08	0 - 6"	A2P2-C23-8^1-RM	TAL A & B	1347255.62	478690.42
	23-09V	0 - 6"	A2P2-C23-9^1-RM-V	ARCHIVE	1347093.38	478656.68
	23-10	0 - 6"	A2P2-C23-10^1-RM	TAL A & B	1347141.84	478646.61
	23-11	0 - 6"	A2P2-C23-11^1-RM	TAL A & B	1347108.85	478598.29
	23-12	0 - 6"	A2P2-C23-12^1-RM	TAL A & B	1347141.94	478571.16
	23-13	0 - 6"	A2P2-C23-13^1-RM	TAL A & B	1347190.09	478649.09
	23-14	0 - 6"	A2P2-C23-14^1-RM	TAL A & B	1347242.42	478637.79
	23-15	0 - 6"	A2P2-C23-15^1-RM	TAL A & B	1347187.45	478590.49
	23-16V	0 - 6"	A2P2-C23-16^1-RM-V	ARCHIVE	1347272.57	478576.53
24	24-01	0 - 6"	A2P2-C24-1^1-RM	TAL A & B	1347242.84	478510.53
	24-02	0 - 6"	A2P2-C24-2^1-RM	TAL A & B	1347279.55	478543.64
	24-03V	0 - 6"	A2P2-C24-3^1-RM-V	ARCHIVE	1347211.32	478451.11
	24-04	0 - 6"	A2P2-C24-4^1-RM	TAL A & B	1347316.84	478469.23
	24-05	0 - 6"	A2P2-C24-5^1-RM	TAL A & B	1347262.15	478433.65
	24-06V	0 - 6"	A2P2-C24-6^1-RM-V	ARCHIVE	1347296.53	478405.49
	24-07	0 - 6"	A2P2-C24-7^1-RM	TAL A & B	1347220.38	478352.02
	24-08D	0 - 6"	A2P2-C24-8^1-RM	TAL A & B	1347282.97	478351.01
		0 - 6"	A2P2-C24-8^1-RM-D	TAL A & B		
	24-09V	0 - 6"	A2P2-C24-9^1-RM-V	ARCHIVE	1347253.07	478305.77
	24-10	0 - 6"	A2P2-C24-10^1-RM	TAL A & B	1347257.81	478233.62
	24-11	0 - 6"	A2P2-C24-11^1-RM	TAL A & B	1347302.07	478234.72
	24-12	0 - 6"	A2P2-C24-12^1-RM	TAL A & B	1347240.93	478167.41
	24-13	0 - 6"	A2P2-C24-13^1-RM	TAL A & B	1347294.38	478178.52
	24-14	0 - 6"	A2P2-C24-14^1-RM	TAL A & B	1347285.69	478124.04
	24-15V	0 - 6"	A2P2-C24-15^1-RM-V	ARCHIVE	1347314.08	478090.54
	24-16	0 - 6"	A2P2-C24-16^1-RM	TAL A & B	1347309.09	478034.9

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
	RHS-1	0 - 6"	A2P2-RHS-C-1^1	NO ANALYSIS - NECESSARY SAMPLES ALREADY COLLECTED/ANALYZED FOR CERTIFICATION	1347133	478359.5
	RHS-2	0 - 6"	A2P2-RHS-C-2^1		1347127	478349
	RHS-3	0 - 6"	A2P2-RHS-C-3^1		1347121	478336.5
	RHS-4	0 - 6"	A2P2-RHS-C-4^1		1347119	478360
	RHS-5	0 - 6"	A2P2-RHS-C-5^1		1347146.98	478346.23
	RHS-6	0 - 6"	A2P2-RHS-C-6^1		1347107	478337
	RHS-7	0 - 6"	A2P2-RHS-C-7^1		1347131	478342.5
25	25-08	0 - 6"	A2P2-C25-8^1-RM	TAL A & B	1347127.71	478367.04
	25-09	0 - 6"	A2P2-C25-9^1-RM	TAL A & B	1347138.69	478372.4
	25-10	0 - 6"	A2P2-C25-10^1-RM	TAL A & B	1347147.9	478366.41
	25-11	0 - 6"	A2P2-C25-11^1-RM	TAL A & B	1347149.75	478357.16
	25-12	0 - 6"	A2P2-C25-12^1-RM	TAL A & B	1347118.45	478348.35
	25-13	0 - 6"	A2P2-C25-13^1-RM	TAL A & B	1347113.24	478329.18
	25-14	0 - 6"	A2P2-C25-14^1-RM	TAL A & B	1347129.92	478331.83
	25-15	0 - 6"	A2P2-C25-15^1-RM-V	ARCHIVE	1347116.93	478322.83
	25-16	0 - 6"	A2P2-C25-16^1-RM	TAL A & B	1347123.83	478320.19
26	26-01V	0 - 6"	A2P2-C26-1^1-RM-V	ARCHIVE	1347167.33	479224.51
	26-02	0 - 6"	A2P2-C26-2^1-RM	TAL A & B	1347197.35	479132.62
	26-03	0 - 6"	A2P2-C26-3^1-RM	TAL A & B	1347200.02	479092.74
	26-04	0 - 6"	A2P2-C26-4^1-RM	TAL A & B	1347203.89	479051.9
	26-05	0 - 6"	A2P2-C26-5^1-RM	TAL A & B	1347219.86	479003.32
	26-06	0 - 6"	A2P2-C26-6^1-RM	TAL A & B	1347223.31	478955.82
	26-07	0 - 6"	A2P2-C26-7^1-RM	TAL A & B	1347239.25	478911.35
	26-08V	0 - 6"	A2P2-C26-8^1-RM-V	ARCHIVE	1347248.81	478872.38
	26-09	0 - 6"	A2P2-C26-9^1-RM	TAL A & B	1347252.03	478833.1
	26-10	0 - 6"	A2P2-C26-10^1-RM	TAL A & B	1347267.54	478777.17
	26-11	0 - 6"	A2P2-C26-11^1-RM	TAL A & B	1347280.8	478741.61
	26-12V	0 - 6"	A2P2-C26-12^1-RM-V	ARCHIVE	1347288.43	478693.51
	26-13	0 - 6"	A2P2-C26-13^1-RM	TAL A & B	1347298.22	478645
	26-14	0 - 6"	A2P2-C26-14^1-RM	TAL A & B	1347317.8	478576.73
	26-15D	0 - 6"	A2P2-C26-15^1-RM	TAL A & B	1347326.18	478526.38
		0 - 6"	A2P2-C26-15^1-RM-D	TAL A & B		
	26-16V	0 - 6"	A2P2-C26-16^1-RM-V	ARCHIVE	1347350.79	478458.34
27	27-01	0 - 6"	A2P2-C27-1^1-RM	TAL A & B	1347691.01	479755.37
	27-02	0 - 6"	A2P2-C27-2^1-RM	TAL A & B	1347591.23	479666.86
	27-03	0 - 6"	A2P2-C27-3^1-RM	TAL A & B	1347482.31	479578.09
	27-04V	0 - 6"	A2P2-C27-4^1-RM-V	ARCHIVE	1347408.62	479520.69
	27-05	0 - 6"	A2P2-C27-5^1-RM	TAL A & B	1347335.69	479447.83
	27-06V	0 - 6"	A2P2-C27-6^1-RM-V	ARCHIVE	1347252.62	479356.78
	27-07	0 - 6"	A2P2-C27-7^1-RM	TAL A & B	1347223	479224.58
	27-08	0 - 6"	A2P2-C27-8^1-RM	TAL A & B	1347239.42	479166.4
	27-09V	0 - 6"	A2P2-C27-9^1-RM-V	ARCHIVE	1347247.88	479097.42
	27-10	0 - 6"	A2P2-C27-10^1-RM	TAL A & B	1347273.64	479009.28
	27-11	0 - 6"	A2P2-C27-11^1-RM	TAL A & B	1347281.41	478974.72
	27-12	0 - 6"	A2P2-C27-12^1-RM	TAL A & B	1347298.71	478936.29
	27-13V	0 - 6"	A2P2-C27-13^1-RM-V	ARCHIVE	1347308.68	478869.76
	27-14D	0 - 6"	A2P2-C27-14^1-RM	TAL A & B	1347312.34	478843.94
		0 - 6"	A2P2-C27-14^1-RM-D	TAL A & B		
	27-15	0 - 6"	A2P2-C27-15^1-RM	TAL A & B	1347316.07	478791.57

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	27-16	0 - 6"	A2P2-C27-16^1-RM	TAL A & B	1347347.06	478763.63
CU	**LOCATION**	**DEPTH**	**SAMPLE ID**	**ANALYSIS**	**EAST-83**	**NORTH-83**
28	28-01	0 - 6"	A2P2-C28-1^1-RM	TAL A & B	1347347.13	478727.01
	28-02	0 - 6"	A2P2-C28-2^1-RM	TAL A & B	1347373.89	478639.9
	28-03D	0 - 6"	A2P2-C28-3^1-RM	TAL A & B	1347491.21	478495.08
		0 - 6"	A2P2-C28-3^1-RM-D	TAL A & B		
	28-04V	0 - 6"	A2P2-C28-4^1-RM-V	ARCHIVE	1347574.77	478355.57
	28-05	0 - 6"	A2P2-C28-5^1-RM	TAL A & B	1347594.43	478300.56
	28-06V	0 - 6"	A2P2-C28-6^1-RM-V	ARCHIVE	1347655.8	478266.01
	28-07	0 - 6"	A2P2-C28-7^1-RM	TAL A & B	1347720.03	478246.47
	28-08	0 - 6"	A2P2-C28-8^1-RM	TAL A & B	1347764.8	478266.67
	28-09	0 - 6"	A2P2-C28-9^1-RM	TAL A & B	1347798.51	478238.71
	28-10V	0 - 6"	A2P2-C28-10^1-RM-V	ARCHIVE	1347841.5	478211.17
	28-11	0 - 6"	A2P2-C28-11^1-RM	TAL A & B	1347884.7	478200.41
	28-12	0 - 6"	A2P2-C28-12^1-RM	TAL A & B	1347929.64	478176.82
	28-13V	0 - 6"	A2P2-C28-13^1-RM-V	ARCHIVE	1347971.48	478154.54
	28-14	0 - 6"	A2P2-C28-14^1-RM	TAL A & B	1348054.77	478140.37
	28-15	0 - 6"	A2P2-C28-15^1-RM	TAL A & B	1348084.78	478105.68
	28-16	0 - 6"	A2P2-C28-16^1-RM	TAL A & B	1348150.41	478066.21
29	29-01	0 - 6"	A2P2-C29-1^1-RM	TAL A & B	1347502.33	478589.18
	29-02V	0 - 6"	A2P2-C29-2^1-RM-V	ARCHIVE	1347553.09	478550.52
	29-03	0 - 6"	A2P2-C29-3^1-RM	TAL A & B	1347495.35	478540.9
	29-04	0 - 6"	A2P2-C29-4^1-RM	TAL A & B	1347543.45	478500.78
	29-05	0 - 6"	A2P2-C29-5^1-RM	TAL A & B	1347607.96	478554.63
	29-06	0 - 6"	A2P2-C29-6^1-RM	TAL A & B	1347700.7	478587.12
	29-07	0 - 6"	A2P2-C29-7^1-RM	TAL A & B	1347621.63	478506.22
	29-08V	0 - 6"	A2P2-C29-8^1-RM-V	ARCHIVE	1347676.59	478526.16
	29-09V	0 - 6"	A2P2-C29-9^1-RM-V	ARCHIVE	1347743.65	478564.22
	29-10D	0 - 6"	A2P2-C29-10^1-RM	TAL A & B	1347845.79	478555.68
		0 - 6"	A2P2-C29-10^1-RM-D	TAL A & B		
	29-11	0 - 6"	A2P2-C29-11^1-RM	TAL A & B	1347775.1	478513.75
	29-12	0 - 6"	A2P2-C29-12^1-RM	TAL A & B	1347814.96	478527.08
	29-13	0 - 6"	A2P2-C29-13^1-RM	TAL A & B	1347570.63	478448.58
	29-14	0 - 6"	A2P2-C29-14^1-RM	TAL A & B	1347604.97	478358.95
	29-15V	0 - 6"	A2P2-C29-15^1-RM-V	ARCHIVE	1347647.16	478336.29
	29-16	0 - 6"	A2P2-C29-16^1-RM	TAL A & B	1347721.35	478328.53
30	30-01	0 - 6"	A2P2-C30-1^1-RM	TAL A & B	1347927.05	478455.77
	30-02V	0 - 6"	A2P2-C30-2^1-RM-V	ARCHIVE	1347971.7	478442.16
	30-03	0 - 6"	A2P2-C30-3^1-RM	TAL A & B	1347923.6	478363.99
	30-04	0 - 6"	A2P2-C30-4^1-RM	TAL A & B	1347976.75	478400.64
	30-05D	0 - 6"	A2P2-C30-5^1-RM	TAL A & B	1347758.69	478339.4
		0 - 6"	A2P2-C30-5^1-RM-D	TAL A & B		
	30-06V	0 - 6"	A2P2-C30-6^1-RM-V	ARCHIVE	1347818.57	478323.97
	30-07	0 - 6"	A2P2-C30-7^1-RM	TAL A & B	1347865.11	478338.77
	30-08	0 - 6"	A2P2-C30-8^1-RM	TAL A & B	1347820.88	478277.67
	30-09V	0 - 6"	A2P2-C30-9^1-RM-V	ARCHIVE	1348012.19	478442.06
	30-10	0 - 6"	A2P2-C30-10^1-RM	TAL A & B	1348029.13	478369.32
	30-11	0 - 6"	A2P2-C30-11^1-RM	TAL A & B	1347968.48	478275.83
	30-12	0 - 6"	A2P2-C30-12^1-RM	TAL A & B	1348010.57	478321.43
	30-13V	0 - 6"	A2P2-C30-13^1-RM-V	ARCHIVE	1347915.98	478305.64
	30-14	0 - 6"	A2P2-C30-14^1-RM	TAL A & B	1347925.67	478245.06
	30-15	0 - 6"	A2P2-C30-15^1-RM	TAL A & B	1347962.26	478218.66

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	30-16	0 - 6"	A2P2-C30-16^1-RM	TAL A & B	1348013.11	478207.54
CU	**LOCATION**	**DEPTH**	**SAMPLE ID**	**ANALYSIS**	**EAST-83**	**NORTH-83**
31	31-01	0 - 6"	A2P2-C31-1^1-RM	TAL A & B	1348093.31	478382.79
	31-02V	0 - 6"	A2P2-C31-2^1-RM-V	ARCHIVE	1348140.92	478420.33
	31-03	0 - 6"	A2P2-C31-3^1-RM	TAL A & B	1348103.13	478350.58
	31-04	0 - 6"	A2P2-C31-4^1-RM	TAL A & B	1348145.69	478308.5
	31-05	0 - 6"	A2P2-C31-5^1-RM	TAL A & B	1348185.09	478416.19
	31-06V	0 - 6"	A2P2-C31-6^1-RM-V	ARCHIVE	1348257.22	478372.56
	31-07	0 - 6"	A2P2-C31-7^1-RM	TAL A & B	1348184.22	478315.11
	31-08	0 - 6"	A2P2-C31-8^1-RM	TAL A & B	1348240	478299.19
	31-09D	0 - 6"	A2P2-C31-9^1-RM	TAL A & B	1348299.55	478407.53
		0 - 6"	A2P2-C31-9^1-RM-D	TAL A & B		
	31-10	0 - 6"	A2P2-C31-10^1-RM	TAL A & B	1348339.31	478388.76
	31-11	0 - 6"	A2P2-C31-11^1-RM	TAL A & B	1348294.93	478330
	31-12V	0 - 6"	A2P2-C31-12^1-RM-V	ARCHIVE	1348365.81	478315.77
	31-13V	0 - 6"	A2P2-C31-13^1-RM-V	ARCHIVE	1348082.46	478298.44
	31-14	0 - 6"	A2P2-C31-14^1-RM	TAL A & B	1348083.27	478258.28
	31-15	0 - 6"	A2P2-C31-15^1-RM	TAL A & B	1348113.21	478215.31
	31-16	0 - 6"	A2P2-C31-16^1-RM	TAL A & B	1348100.97	478148.28
32	A2P2-N2-1	0 - 6"	A2P2-N2-1-1-R	NO ANALYSIS NECESSARY - SAMPLES ALREADY COLLECTED/ANALYZED FOR CERTIFICATION	1348167.91	478230.41
			A2P2-N2-1-1-M			
	A2P2-N2-2	0 - 6"	A2P2-N2-2-1-R		1348210.47	478232.04
			A2P2-N2-2-1-M			
	A2P2-N2-4	0 - 6"	A2P2-N2-4-1-R		1348257.71	478246.76
			A2P2-N2-4-1-M			
	A2P2-N2-5	0 - 6"	A2P2-N2-5-1-R		1348171.99	478168.19
			A2P2-N2-5-1-M			
	A2P2-N2-6	0 - 6"	A2P2-N2-6-1-R		1348235.93	478145.53
			A2P2-N2-6-1-M			
	A2P2-N2-7	0 - 6"	A2P2-N2-7-1-R		1348258.7	478194.54
			A2P2-N2-7-1-M			
	A2P2-N2-8	0 - 6"	A2P2-N2-8-1-R		1348328.49	478194.1
			A2P2-N2-8-1-M			
	32-01V	0 - 6"	A2P2-C32-1^1-RM-V	ARCHIVE	1348210.1	478197
	32-02V	0 - 6"	A2P2-C32-2^1-RM-V	ARCHIVE	1348346.27	478250.91
	32-03	0 - 6"	A2P2-C32-3^1-RM	TAL A & B	1348182.31	478135.22
	32-04-V	0 - 6"	A2P2-C32-4^1-RM-V	ARCHIVE	1348204.99	478077.04
	32-05	0 - 6"	A2P2-C32-5^1-RM	TAL A & B	1348275.61	478057.51
	32-06	0 - 6"	A2P2-C32-6^1-RM	TAL A & B	1348278.77	478115.67
	32-07	0 - 6"	A2P2-C32-7^1-RM	TAL A & B	1348368.81	478136.62
	32-08-V	0 - 6"	A2P2-C32-8^1-RM-V	ARCHIVE	1348327.69	478080.1
	32-09D	0 - 6"	A2P2-C32-9^1-RM	TAL A & B	1348349.3	478019.24
		0 - 6"	A2P2-C32-9^1-RM-D	TAL A & B		
33	33-01	0 - 6"	A2P2-C33-1^1-RM	TAL A & B	1348423.99	478422.55
	33-02V	0 - 6"	A2P2-C33-2^1-RM-V	ARCHIVE	1348462.87	478442.92
	33-03	0 - 6"	A2P2-C33-3^1-RM	TAL A & B	1348387.66	478386.78
	33-04	0 - 6"	A2P2-C33-4^1-RM	TAL A & B	1348456.38	478381.65
	33-05V	0 - 6"	A2P2-C33-5^1-RM-V	ARCHIVE	1348514.8	478431.39
	33-06	0 - 6"	A2P2-C33-6^1-RM	TAL A & B	1348490.53	478368.71
	33-07	0 - 6"	A2P2-C33-7^1-RM	TAL A & B	1348483.4	478302.64
	33-08	0 - 6"	A2P2-C33-8^1-RM	TAL A & B	1348448.8	478248.6
	33-09	0 - 6"	A2P2-C33-9^1-RM	TAL A & B	1348397.01	478320.17
	33-10	0 - 6"	A2P2-C33-10^1-RM	TAL A & B	1348456.4	478318.04
	33-11	0 - 6"	A2P2-C33-11^1-RM	TAL A & B	1348396.59	478266.72
	33-12V	0 - 6"	A2P2-C33-12^1-RM-V	ARCHIVE	1348398.38	478218.27
	33-13	0 - 6"	A2P2-C33-13^1-RM	TAL A & B	1348399.79	478167.32
	33-14	0 - 6"	A2P2-C33-14^1-RM	TAL A & B	1348436.84	478161.5
	33-15D	0 - 6"	A2P2-C33-15^1-RM	TAL A & B	1348399.31	478102.47
		0 - 6"	A2P2-C33-15^1-RM-D	TAL A & B		

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	33-16V	0 - 6"	A2P2-C33-16^1-RM-V	ARCHIVE	1348394.16	478037.53
CU	**LOCATION**	**DEPTH**	**SAMPLE ID**	**ANALYSIS**	**EAST-83**	**NORTH-83**
34	34-01	0 - 6"	A2P2-C34-1^1-RM	TAL A & B	1348260.02	478583.29
	34-02V	0 - 6"	A2P2-C34-2^1-RM-V	ARCHIVE	1348319.18	478554.69
	34-03	0 - 6"	A2P2-C34-3^1-RM	TAL A & B	1348241.3	478504.33
	34-04	0 - 6"	A2P2-C34-4^1-RM	TAL A & B	1348293.67	478531
	34-05	0 - 6"	A2P2-C34-5^1-RM	TAL A & B	1348359	478598.96
	34-06V	0 - 6"	A2P2-C34-6^1-RM-V	ARCHIVE	1348404.28	478582.93
	34-07	0 - 6"	A2P2-C34-7^1-RM	TAL A & B	1348337.97	478509.65
	34-08	0 - 6"	A2P2-C34-8^1-RM	TAL A & B	1348386.5	478513.54
	34-09	0 - 6"	A2P2-C34-9^1-RM	TAL A & B	1348449.33	478561.59
	34-10	0 - 6"	A2P2-C34-10^1-RM	TAL A & B	1348504.13	478536.58
	34-11V	0 - 6"	A2P2-C34-11^1-RM-V	ARCHIVE	1348434.48	478511.33
	34-12	0 - 6"	A2P2-C34-12^1-RM	TAL A & B	1348502.66	478493.79
	34-13	0 - 6"	A2P2-C34-13^1-RM	TAL A & B	1348262.88	478462.56
	34-14	0 - 6"	A2P2-C34-14^1-RM	TAL A & B	1348322.52	478457.23
	34-15V	0 - 6"	A2P2-C34-15^1-RM-V	ARCHIVE	1348355.88	478472.34
	34-16D	0 - 6"	A2P2-C34-16^1-RM	TAL A & B	1348412.1	478479.34
		0 - 6"	A2P2-C34-16^1-RM-D	TAL A & B		
35	35-01	0 - 6"	A2P2-C35-1^1-RM	TAL A & B	1348250.18	478736.27
	35-02	0 - 6"	A2P2-C35-2^1-RM	TAL A & B	1348314.47	478723.98
	35-03V	0 - 6"	A2P2-C35-3^1-RM-V	ARCHIVE	1348270.54	478689.16
	35-04	0 - 6"	A2P2-C35-4^1-RM	TAL A & B	1348346.95	478676.74
	35-05D	0 - 6"	A2P2-C35-5^1-RM	TAL A & B	1348374.65	478756.6
		0 - 6"	A2P2-C35-5^1-RM-D	TAL A & B		
	35-06	0 - 6"	A2P2-C35-6^1-RM	TAL A & B	1348465.94	478781.2
	35-07	0 - 6"	A2P2-C35-7^1-RM	TAL A & B	1348422.87	478677.78
	35-08V	0 - 6"	A2P2-C35-8^1-RM-V	ARCHIVE	1348537.12	478783.66
	35-09	0 - 6"	A2P2-C35-9^1-RM	TAL A & B	1348614.38	478800.89
	35-10V	0 - 6"	A2P2-C35-10^1-RM-V	ARCHIVE	1348514.06	478740.04
	35-11	0 - 6"	A2P2-C35-11^1-RM	TAL A & B	1348589.88	478745.86
	35-12	0 - 6"	A2P2-C35-12^1-RM	TAL A & B	1348506.28	478674.94
	35-13	0 - 6"	A2P2-C35-13^1-RM	TAL A & B	1348258.57	478624.58
	35-14	0 - 6"	A2P2-C35-14^1-RM	TAL A & B	1348334.56	478637.99
	35-15V	0 - 6"	A2P2-C35-15^1-RM-V	ARCHIVE	1348378.28	478640.89
	35-16	0 - 6"	A2P2-C35-16^1-RM	TAL A & B	1348457.42	478667.69
36	36-01	0 - 6"	A2P2-C36-1^1-RM	TAL A & B	1348064.53	478718.91
	36-02	0 - 6"	A2P2-C36-2^1-RM	TAL A & B	1348122.97	478764.09
	36-03	0 - 6"	A2P2-C36-3^1-RM	TAL A & B	1348149.34	478693.03
	36-04-V	0 - 6"	A2P2-C36-4^1-RM-V	ARCHIVE	1348220.11	478725.27
	36-05-V	0 - 6"	A2P2-C36-5^1-RM-V	ARCHIVE	1348104.32	478641.52
	36-06	0 - 6"	A2P2-C36-6^1-RM	TAL A & B	1348164.52	478639.06
	36-07	0 - 6"	A2P2-C36-7^1-RM	TAL A & B	1348083.77	478586.51
	36-08	0 - 6"	A2P2-C36-8^1-RM	TAL A & B	1348115.78	478566.19
	36-09	0 - 6"	A2P2-C36-9^1-RM	TAL A & B	1348186.09	478671.03
	36-10-V	0 - 6"	A2P2-C36-10^1-RM-V	ARCHIVE	1348185.61	478595.19
	36-11	0 - 6"	A2P2-C36-11^1-RM	TAL A & B	1348155.51	478516.36
	36-12	0 - 6"	A2P2-C36-12^1-RM	TAL A & B	1348203.97	478518.43
	36-13	0 - 6"	A2P2-C36-13^1-RM	TAL A & B	1348086.55	478530.98
	36-14-V	0 - 6"	A2P2-C36-14^1-RM-V	ARCHIVE	1348083.1	478463.68
	36-15D	0 - 6"	A2P2-C36-15^1-RM	TAL A & B	1348151.99	478468.22
		0 - 6"	A2P2-C36-15^1-RM-D	TAL A & B		

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	36-16	0 - 6"	A2P2-C36-16^1-RM	TAL A & B	1348204.22	478475.82
CU	**LOCATION**	**DEPTH**	**SAMPLE ID**	**ANALYSIS**	**EAST-83**	**NORTH-83**
37	37-01	0 - 6"	A2P2-C37-1^1-RM	TAL A & B	1347925.89	478804.06
	37-02	0 - 6"	A2P2-C37-2^1-RM	TAL A & B	1347887.38	478739.99
	37-03	0 - 6"	A2P2-C37-3^1-RM	TAL A & B	1347972.75	478755.92
	37-04V	0 - 6"	A2P2-C37-4^1-RM-V	ARCHIVE	1348015.9	478760.66
	37-05V	0 - 6"	A2P2-C37-5^1-RM-V	ARCHIVE	1347899.8	478689.52
	37-06	0 - 6"	A2P2-C37-6^1-RM	TAL A & B	1347975.06	478691.59
	37-07	0 - 6"	A2P2-C37-7^1-RM	TAL A & B	1347881.05	478614.32
	37-08	0 - 6"	A2P2-C37-8^1-RM	TAL A & B	1347979.25	478614.59
	37-09	0 - 6"	A2P2-C37-9^1-RM	TAL A & B	1348026.37	478682.67
	37-10	0 - 6"	A2P2-C37-10^1-RM	TAL A & B	1348023.96	478641.97
	37-11D	0 - 6"	A2P2-C37-11^1-RM	TAL A & B	1348024.36	478554.79
		0 - 6"	A2P2-C37-11^1-RM-D	TAL A & B		
	37-12V	0 - 6"	A2P2-C37-12^1-RM-V	ARCHIVE	1348012.06	478502.12
	37-13V	0 - 6"	A2P2-C37-13^1-RM-V	ARCHIVE	1347904.84	478564.62
	37-14	0 - 6"	A2P2-C37-14^1-RM	TAL A & B	1347973.87	478554.18
	37-15	0 - 6"	A2P2-C37-15^1-RM	TAL A & B	1347896.92	478532.52
	37-16	0 - 6"	A2P2-C37-16^1-RM	TAL A & B	1347951.3	478525.8
38	38-01D	0 - 6"	A2P2-C38-1^1-RM	TAL A & B	1347670.38	478797.31
		0 - 6"	A2P2-C38-1^1-RM-D	TAL A & B		
	38-02V	0 - 6"	A2P2-C38-2^1-RM-V	ARCHIVE	1347690.52	478835.62
	38-03	0 - 6"	A2P2-C38-3^1-RM	TAL A & B	1347641.25	478758.89
	38-04	0 - 6"	A2P2-C38-4^1-RM	TAL A & B	1347715.77	478769.1
	38-05	0 - 6"	A2P2-C38-5^1-RM	TAL A & B	1347766.87	478814.92
	38-06V	0 - 6"	A2P2-C38-6^1-RM-V	ARCHIVE	1347809.74	478790.85
	38-07	0 - 6"	A2P2-C38-7^1-RM	TAL A & B	1347795.75	478739.47
	38-08	0 - 6"	A2P2-C38-8^1-RM	TAL A & B	1347847.45	478747.37
	38-09	0 - 6"	A2P2-C38-9^1-RM	TAL A & B	1347629.7	478675.78
	38-10	0 - 6"	A2P2-C38-10^1-RM	TAL A & B	1347718.78	478697.4
	38-11	0 - 6"	A2P2-C38-11^1-RM	TAL A & B	1347631.11	478608.34
	38-12V	0 - 6"	A2P2-C38-12^1-RM-V	ARCHIVE	1347703.41	478655.07
	38-13	0 - 6"	A2P2-C38-13^1-RM	TAL A & B	1347769.12	478666.73
	38-14	0 - 6"	A2P2-C38-14^1-RM	TAL A & B	1347844.47	478671.39
	38-15	0 - 6"	A2P2-C38-15^1-RM	TAL A & B	1347768.71	478623.24
	38-16V	0 - 6"	A2P2-C38-16^1-RM-V	ARCHIVE	1347812.64	478627.64
39	39-01	0 - 6"	A2P2-C39-1^1-RM	TAL A & B	1347415.66	478822.14
	39-02	0 - 6"	A2P2-C39-2^1-RM	TAL A & B	1347454.96	478804.02
	39-03V	0 - 6"	A2P2-C39-3^1-RM-V	ARCHIVE	1347360.09	478798.97
	39-04	0 - 6"	A2P2-C39-4^1-RM	TAL A & B	1347468.74	478758.08
	39-05V	0 - 6"	A2P2-C39-5^1-RM-V	ARCHIVE	1347519.98	478810.5
	39-06	0 - 6"	A2P2-C39-6^1-RM	TAL A & B	1347606.85	478817.11
	39-07	0 - 6"	A2P2-C39-7^1-RM	TAL A & B	1347548.27	478732.46
	39-08	0 - 6"	A2P2-C39-8^1-RM	TAL A & B	1347595.06	478736.6
	39-09	0 - 6"	A2P2-C39-9^1-RM	TAL A & B	1347407.81	478699.96
	39-10	0 - 6"	A2P2-C39-10^1-RM	TAL A & B	1347453.03	478709.67
	39-11V	0 - 6"	A2P2-C39-11^1-RM-V	ARCHIVE	1347398.85	478660.61
	39-12D	0 - 6"	A2P2-C39-12^1-RM	TAL A & B	1347465.39	478632.9
		0 - 6"	A2P2-C39-12^1-RM-D	TAL A & B		
	39-13	0 - 6"	A2P2-C39-13^1-RM	TAL A & B	1347517.76	478676.16
	39-14	0 - 6"	A2P2-C39-14^1-RM	TAL A & B	1347587.15	478693.89
	39-15	0 - 6"	A2P2-C39-15^1-RM	TAL A & B	1347517.25	478607.82

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	39-16V	0 - 6"	A2P2-C39-16^1-RM-V	ARCHIVE	1347578.98	478602
CU	**LOCATION**	**DEPTH**	**SAMPLE ID**	**ANALYSIS**	**EAST-83**	**NORTH-83**
40	40-01D	0 - 6"	A2P2-C40-1^1-RM	TAL A & B	1347342.4	478927.1
		0 - 6"	A2P2-C40-1^1-RM-D	TAL A & B		
	40-02	0 - 6"	A2P2-C40-2^1-RM	TAL A & B	1347431.38	478956.62
	40-03	0 - 6"	A2P2-C40-3^1-RM	TAL A & B	1347342.9	478885.19
	40-04V	0 - 6"	A2P2-C40-4^1-RM-V	ARCHIVE	1347406.09	478862.02
	40-05	0 - 6"	A2P2-C40-5^1-RM	TAL A & B	1347475.66	478913.39
	40-06	0 - 6"	A2P2-C40-6^1-RM	TAL A & B	1347522.41	478958.31
	40-07V	0 - 6"	A2P2-C40-7^1-RM-V	ARCHIVE	1347477.34	478871.17
	40-08	0 - 6"	A2P2-C40-8^1-RM	TAL A & B	1347540.18	478848.81
	40-09	0 - 6"	A2P2-C40-9^1-RM	TAL A & B	1347618.23	478950.55
	40-10	0 - 6"	A2P2-C40-10^1-RM	TAL A & B	1347679.76	478934.64
	40-11	0 - 6"	A2P2-C40-11^1-RM	TAL A & B	1347579.25	478890.1
	40-12V	0 - 6"	A2P2-C40-12^1-RM-V	ARCHIVE	1347664.4	478856.85
	40-13	0 - 6"	A2P2-C40-13^1-RM	TAL A & B	1347717.08	478928.81
	40-14	0 - 6"	A2P2-C40-14^1-RM	TAL A & B	1347806.83	478899.44
	40-15	0 - 6"	A2P2-C40-15^1-RM	TAL A & B	1347717	478873.29
	40-16V	0 - 6"	A2P2-C40-16^1-RM-V	ARCHIVE	1347770.94	478867.47
41	41-01	0 - 6"	A2P2-C41-1^1-RM	TAL A & B	1347284.18	479199.02
	41-02	0 - 6"	A2P2-C41-2^1-RM	TAL A & B	1347374.67	479174.44
	41-03	0 - 6"	A2P2-C41-3^1-RM	TAL A & B	1347252.78	479165.63
	41-04V	0 - 6"	A2P2-C41-4^1-RM-V	ARCHIVE	1347367.63	479117.49
	41-05	0 - 6"	A2P2-C41-5^1-RM	TAL A & B	1347418.22	479163.31
	41-06D	0 - 6"	A2P2-C41-6^1-RM	TAL A & B	1347454.39	479201.5
		0 - 6"	A2P2-C41-6^1-RM-D	TAL A & B		
	41-07V	0 - 6"	A2P2-C41-7^1-RM-V	ARCHIVE	1347417.08	479122.99
	41-08	0 - 6"	A2P2-C41-8^1-RM	TAL A & B	1347460.94	479114.91
	41-09V	0 - 6"	A2P2-C41-9^1-RM-V	ARCHIVE	1347300.73	479100.14
	41-10	0 - 6"	A2P2-C41-10^1-RM	TAL A & B	1347328.78	479063.26
	41-11	0 - 6"	A2P2-C41-11^1-RM	TAL A & B	1347295.38	479031.37
	41-12	0 - 6"	A2P2-C41-12^1-RM	TAL A & B	1347353.59	478985.81
	41-13	0 - 6"	A2P2-C41-13^1-RM	TAL A & B	1347401.38	479042.81
	41-14V	0 - 6"	A2P2-C41-14^1-RM-V	ARCHIVE	1347477.38	479067.95
	41-15	0 - 6"	A2P2-C41-15^1-RM	TAL A & B	1347426.08	479006.32
	41-16	0 - 6"	A2P2-C41-16^1-RM	TAL A & B	1347475.53	478985.48
42	42-01	0 - 6"	A2P2-C42-1^1-RM	TAL A & B	1347541.86	479176.78
	42-02	0 - 6"	A2P2-C42-2^1-RM	TAL A & B	1347595.77	479202.13
	42-03	0 - 6"	A2P2-C42-3^1-RM	TAL A & B	1347557.45	479114.4
	42-04V	0 - 6"	A2P2-C42-4^1-RM-V	ARCHIVE	1347598.79	479111.56
	42-05	0 - 6"	A2P2-C42-5^1-RM	TAL A & B	1347664.5	479179.12
	42-06V	0 - 6"	A2P2-C42-6^1-RM-V	ARCHIVE	1347709.51	479176.8
	42-07D	0 - 6"	A2P2-C42-7^1-RM	TAL A & B	1347670.76	479113.12
		0 - 6"	A2P2-C42-7^1-RM-D	TAL A & B		
	42-08	0 - 6"	A2P2-C42-8^1-RM	TAL A & B	1347727.96	479099.14
	42-09	0 - 6"	A2P2-C42-9^1-RM	TAL A & B	1347522.14	479058.49
	42-10V	0 - 6"	A2P2-C42-10^1-RM-V	ARCHIVE	1347584.14	479070.79
	42-11	0 - 6"	A2P2-C42-11^1-RM	TAL A & B	1347526.29	478988.08
	42-12	0 - 6"	A2P2-C42-12^1-RM	TAL A & B	1347613.1	479006.85
	42-13	0 - 6"	A2P2-C42-13^1-RM	TAL A & B	1347650.94	479066.58
	42-14	0 - 6"	A2P2-C42-14^1-RM	TAL A & B	1347694.26	479044
	42-15	0 - 6"	A2P2-C42-15^1-RM	TAL A & B	1347673.97	478999.35

APPENDIX B
AREA 2 PHASE II CERTIFICATION SAMPLES

	42-16V	0 - 6"	A2P2-C42-16^1-RM-V	ARCHIVE	1347734.14	478976.45
CU	LOCATION	DEPTH	SAMPLE ID	ANALYSIS	EAST-83	NORTH-83
43	43-01	0 - 6"	A2P2-C43-1^1-RM	TAL A & B	1347523.71	479489.96
	43-02	0 - 6"	A2P2-C43-2^1-RM	TAL A & B	1347570.92	479465.04
	43-03	0 - 6"	A2P2-C43-3^1-RM	TAL A & B	1347524.69	479417.29
	43-04V	0 - 6"	A2P2-C43-4^1-RM-V	ARCHIVE	1347609.01	479389.92
	43-05V	0 - 6"	A2P2-C43-5^1-RM-V	ARCHIVE	1347640.57	479483.78
	43-06	0 - 6"	A2P2-C43-6^1-RM	TAL A & B	1347712.58	479466.96
	43-07	0 - 6"	A2P2-C43-7^1-RM	TAL A & B	1347643.79	479401.75
	43-08	0 - 6"	A2P2-C43-8^1-RM	TAL A & B	1347680.81	479421.21
	43-09	0 - 6"	A2P2-C43-9^1-RM	TAL A & B	1347532.8	479303.24
	43-10D	0 - 6"	A2P2-C43-10^1-RM	TAL A & B	1347569.3	479333.53
		0 - 6"	A2P2-C43-10^1-RM-D	TAL A & B		
	43-11V	0 - 6"	A2P2-C43-11^1-RM-V	ARCHIVE	1347541.59	479252.85
	43-12	0 - 6"	A2P2-C43-12^1-RM	TAL A & B	1347574.61	479245.4
	43-13	0 - 6"	A2P2-C43-13^1-RM	TAL A & B	1347640.77	479319.7
	43-14	0 - 6"	A2P2-C43-14^1-RM	TAL A & B	1347707.04	479318.81
	43-15V	0 - 6"	A2P2-C43-15^1-RM-V	ARCHIVE	1347665.33	479236.49
	43-16	0 - 6"	A2P2-C43-16^1-RM	TAL A & B	1347689.16	479276.07
44	44-01D	0 - 6"	A2P2-C44-1^1-RM	TAL A & B	1347436.78	479481.77
		0 - 6"	A2P2-C44-1^1-RM-D	TAL A & B		
	44-02V	0 - 6"	A2P2-C44-2^1-RM-V	ARCHIVE	1347470.72	479458.01
	44-03	0 - 6"	A2P2-C44-3^1-RM	TAL A & B	1347399.37	479374.17
	44-04	0 - 6"	A2P2-C44-4^1-RM	TAL A & B	1347465.96	479385.18
	44-05	0 - 6"	A2P2-C44-5^1-RM	TAL A & B	1347329.37	479431.92
	44-06V	0 - 6"	A2P2-C44-6^1-RM-V	ARCHIVE	1347358.32	479395.72
	44-07	0 - 6"	A2P2-C44-7^1-RM	TAL A & B	1347281.79	479347.33
	44-08	0 - 6"	A2P2-C44-8^1-RM	TAL A & B	1347292.58	479310.88
	44-09V	0 - 6"	A2P2-C44-9^1-RM-V	ARCHIVE	1347261.59	479234.1
	44-10	0 - 6"	A2P2-C44-10^1-RM	TAL A & B	1347312.41	479252.02
	44-11	0 - 6"	A2P2-C44-11^1-RM	TAL A & B	1347372.5	479279.58
	44-12	0 - 6"	A2P2-C44-12^1-RM	TAL A & B	1347350.76	479341.06
	44-13	0 - 6"	A2P2-C44-13^1-RM	TAL A & B	1347425.45	479335.52
	44-14	0 - 6"	A2P2-C44-14^1-RM	TAL A & B	1347467.23	479328.43
	44-15	0 - 6"	A2P2-C44-15^1-RM	TAL A & B	1347430.34	479248.57
	44-16V	0 - 6"	A2P2-C44-16^1-RM-V	ARCHIVE	1347472.48	479239.75
45	45-01	0 - 6"	A2P2-C45-1^1-RM	TAL A & B	1347688.9	479718.35
	45-02V	0 - 6"	A2P2-C45-2^1-RM-V	ARCHIVE	1347787.66	479760.4
	45-03D	0 - 6"	A2P2-C45-3^1-RM	TAL A & B	1347752.79	479706.44
		0 - 6"	A2P2-C45-3^1-RM-D	TAL A & B		
	45-04	0 - 6"	A2P2-C45-4^1-RM	TAL A & B	1347793.73	479671.61
	45-05v	0 - 6"	A2P2-C45-5^1-RM-V	TAL A & B	1347630.16	479674.41
	45-06	0 - 6"	A2P2-C45-6^1-RM	ARCHIVE	1347693.96	479678.24
	45-07	0 - 6"	A2P2-C45-7^1-RM	TAL A & B	1347732.82	479632.02
	45-08	0 - 6"	A2P2-C45-8^1-RM	TAL A & B	1347726.38	479590.21
	45-09	0 - 6"	A2P2-C45-9^1-RM	TAL A & B	1347552.49	479615.02
	45-10	0 - 6"	A2P2-C45-10^1-RM	TAL A & B	1347628.51	479581.28
	45-11	0 - 6"	A2P2-C45-11^1-RM	TAL A & B	1347661.06	479628.31
	45-12V	0 - 6"	A2P2-C45-12^1-RM-V	ARCHIVE	1347705.79	479544.27
	45-13V	0 - 6"	A2P2-C45-13^1-RM-V	ARCHIVE	1347446.14	479517.6
	45-14	0 - 6"	A2P2-C45-14^1-RM	TAL A & B	1347518.52	479535.25
	45-15	0 - 6"	A2P2-C45-15^1-RM	TAL A & B	1347575.94	479527.8
	45-16	0 - 6"	A2P2-C45-16^1-RM	TAL A & B	1347640.1	479541.63